



**CONESTOGA-ROVERS
& ASSOCIATES**

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October 31, 2013

Reference No. 006029-50

Mr. Regan S. Williams
State Project Coordinator
Ohio EPA
Division of Emergency & Remedial Response
2110 East Aurora Road
Twinsburg, Ohio 44087

US EPA RECORDS CENTER REGION 5
972916
537105

Dear Mr. Williams:

Re: April 2013 Groundwater, Surface Water, and Sediment Monitoring
Summit National Superfund Site
Deerfield, Ohio

In accordance with the Consent Decree and Statement of Work (SOW) requirements for the Summit National Superfund Site (Site) in Deerfield, Ohio, the Summit National Facility Trust (SNFT) herewith submits two copies of the results of the April 2013 annual groundwater, surface water, and sediment monitoring event at the Site, in accordance with the revised monitoring schedule provided in the April 2009 Groundwater Monitoring Report [Conestoga-Rovers & Associates (CRA), September 2, 2009]. The event was conducted on April 29-30, 2013.

A. GROUNDWATER QUALITY MONITORING

The following groundwater monitoring wells were sampled during the event:

1. Water Table Unit (WTU) wells:
 - On-Site wells: MW-11, MW-107, MW-108, MW-111, MW-113
 - Off-Site downgradient wells: MW-4, MW-114, MW-115
2. Upper Intermediate Unit (UIU) wells:
 - On-Site wells: MW-207, MW-224
 - Off-Site downgradient wells: MW-209, MW-220

The samples were analyzed by Accutest Laboratories (Accutest) of Dayton, New Jersey, for the Site-Specific Indicator Parameter List (SSIPL) of compounds provided in **Table 1**.

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Attachment A is a memorandum summarizing the groundwater monitoring field activities for the April 2013 groundwater monitoring event. Three of the eight WTU wells and the four UIU wells were purged dry. The wells recovered sufficiently for complete sample sets to be obtained.

Attachment B presents a summary of the analytical results for the detected compounds in the groundwater, surface water, and sediment samples collected in April 2013, as follows:

<i>Tables in Attachment B</i>	<i>Analytical Results</i>
Table B.1	WTU Monitoring Wells
Table B.2	UIU Monitoring Wells
Table B.3	Surface Water
Table B.4	Sediment Sample
Table B.5	Rinse Blanks
Table B.6	Rinse Blank, Sediment
Table B.7	Field Blank, Surface Water
Table B.8	Trip Blank

CRA's data quality assessment for the April 2013 analyses is included in **Attachment C**. The groundwater, surface water, and sediment data were determined to be usable with the noted qualifications.

A summary of the SSIPL compounds detected within the WTU and UIU groundwater samples during the sampling events conducted in 2004 (baseline), 2009 (first 5-year event after shutdown of the groundwater extraction system), and 2010 to 2013 are presented on the attached **Figures 1** and **2**, respectively. Changes in concentrations of detected SSIPL compounds in the WTU and UIU are discussed in general below. Comparison of this year's results to the 2012 results does not provide sufficient data points (i.e., two data points) to determine a trend. Trend analyses are conducted for the 5-year monitoring reports, with the next 5-year sampling event scheduled to be completed in 2014.

WTU Trends – On-Site Wells (MW-11, MW-107, MW-108, MW-111, MW-113)

Concentrations for the 2013 event were generally consistent with the 2012 event, as summarized below:

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- MW-11 – concentrations of the SSIPL compounds were similar to or slightly higher compared to the 2012 concentrations (see **Figure 1**), but were lower than the concentrations in 2004, except for 1,1-Dichloroethane, trans-1,2-Dichloroethene, and vinyl chloride;
- MW-107 – concentrations of the SSIPL compounds were similar to or slightly higher or lower compared to the 2012 concentrations (see **Figure 1**) and were lower than the concentrations in 2004, except for 1,1-Dichloroethane, benzene, chlorobenzene, ethylbenzene, vinyl chloride and total xylenes;
- MW-108 – concentrations of the SSIPL compounds were similar to or slightly higher or lower compared to the 2012 concentrations (see **Figure 1**) and were higher than the concentrations in 2004;
- MW-111 – overall concentrations of the SSIPL compounds were similar to or slightly higher compared to the 2012 concentrations (see **Figure 1**) and were lower than the concentrations in 2004, except for chloroethane; and
- MW-113 – SSIPL compounds were non-detect, including acetone that was detected in 2012.

A summary comparison of changes from the 2012 groundwater monitoring results for detected volatile organic compounds (VOCs) in the on-Site WTU wells in 2013 is provided below.

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-11	1,1,1-Trichloroethane	24.4	28.0	200
	1,1-Dichloroethane	63.3	77.7	-
	1,2-Dichloroethane	1.3	1.5	5
	Benzene	0.55 J	0.70 J	5
	cis-1,2-Dichloroethene	44.2	57.5	70
	trans-1,2-Dichloroethene	1.6	2.1	100
	Trichloroethene	75.6	88.9	5
	Vinyl Chloride	4.1	6.2	2
MW-107	1,1,1-Trichloroethane	57.1	33.0	200
	1,1-Dichloroethane	1610	1340	-
	1,2-Dichloroethane	210	137	5
	Benzene	89.1	90.9	5
	Chlorobenzene	51.9	55.1	100
	cis-1,2-Dichloroethene	208	104	70



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Well ID	Parameters	2012	2013	MCL ($\mu\text{g/L}$)
MW-107 <i>cont'd</i>	Ethylbenzene	907	1030	700
	Toluene	1510	2690	1,000
	Trichloroethene	5.1	4.2 J	5
	Vinyl Chloride	142	97.8	2
	Xylenes, Total	3320	3390	10,000
MW-108	1,1,1-Trichloroethane	6.1	5.0/5.3	200
	1,1-Dichloroethane	329	299/309	-
	1,2-Dichloroethane	68.5	67.1/67.6	5
	Benzene	120	126/126	5
	cis-1,2-Dichloroethene	199	201/208	70
	Ethylbenzene	0.81 J	0.50 J/0.45 J	700
	Toluene	1.1	1.0/0.97 J	1,000
	trans-1,2-Dichloroethene	5.8	5.9/6.0	100
	Trichloroethene	31.0	27.8/27.8	5
	Vinyl Chloride	119	115/117	2
MW-111	Xylenes, Total	0.32 J	0.39 J/0.25 J	10,000
	1,1-Dichloroethane	32.2	32.9	-
	1,2-Dichloroethane	73.7	96.4	5
	Chloroethane	1.2	1.7	-
	cis-1,2-Dichloroethene	6.3	7.1	70
MW-111	Vinyl Chloride	6.2	6.5	2

Note: "J" indicates an estimated result below the reporting limit

Overall, the SSIPL concentrations in on-Site WTU wells in 2013 varied (some higher, some lower) when compared to 2004 concentrations, with total VOC concentrations less than 2004 results. The changes measured between the 2012 and 2013 events were generally within historical ranges. Minor fluctuations in concentrations are expected in the on-Site WTU wells because of their location near former waste disposal. Variations in water table position, slight changes in flow pathways and natural attenuation will result in the fluctuations noted.

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WTU Trends - Off-Site Wells (MW-4, MW-114, MW-115)

No SSIPL compounds were detected at MW-4 and MW-114 for the 2012 and 2013 sampling events (see **Figure 1**), which is consistent with the 2004 sampling event and later sampling events. At MW-115, low concentrations of 1,1-Dichloroethane and cis-1,2-Dichloroethene were similar to the 2011 and 2012 concentrations (see **Figure 1**) and remain generally within the range of concentrations detected since 2004. A summary comparison of changes from the 2012 groundwater monitoring results for detected VOC compounds in off-Site WTU well MW-115 is provided below.

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-115	1,1-Dichloroethane	2.0	2.1	-
	1,2-Dichloroethane	ND (1.0)	0.60 J	5
	cis-1,2-Dichloroethene	7.4	10.1	70
	trans-1,2-Dichloroethene	ND (1.0)	0.31 J	100

Note: "J" indicates an estimated result below the reporting limit

UIU Trends - On-Site Wells (MW-207, W-224)

No SSIPL compounds were detected in the on-Site UIU wells sampled in 2013, which is consistent with the four previous sampling events (see **Figure 2**).

UIU Trends - Off-Site Wells (MW-209, W-220)

No SSIPL compounds were detected in the off-Site UIU wells sampled in 2013 (see **Figure 2**), except for acetone at MW-209. Acetone was not detected at MW-209 in 2011 and 2012, but was detected in prior years. Concentrations remain within the range of concentrations detected since 2004. A summary comparison of changes from the 2012 groundwater monitoring results for detected VOC compounds in off-Site UIU well MW-209 is provided below.

Well ID	Parameters	2012	2013	MCL (µg/L)
MW-209	Acetone	ND (5.0)	12.8	-



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Acetone Trends

Past Ohio Environmental Protection Agency (OEPA) comments inquired about possible trends in acetone concentrations; therefore, a summary of the acetone monitoring and trends is provided herein. Because acetone is a common laboratory contaminant, it is often reported at estimated values in environmental samples due to background contamination in the laboratory rather than actual presence of the compound in samples.

Acetone is a SSIPL compound that has previously been detected in two on-Site WTU wells (MW-108, MW-113) and in two downgradient off-Site UIU wells (MW-209, MW-220). These four wells are located in the vicinity of the eastern property boundary. Many of the past detections were estimated results (J-values) below the reporting limit and the four wells did not have detections of acetone every year.

Table D.1 (Attachment D) summarizes the acetone concentrations from 2004 to 2013 for MW-108, MW-113, MW-209, and MW-220. Results indicate minor fluctuations, but no increasing or decreasing trends from year to year. Of the four wells, acetone was only detected at MW-209 for the 2013 sampling event. SNFT does not believe that there is an increasing trend in acetone concentrations in these wells, but will continue to monitor them annually for acetone.

Note that the United States Environmental Protection Agency (USEPA) Regional Screening Level (RSL) for acetone in tap water is 22,000 µg/L, which is significantly higher than the detected concentrations.

B. GROUNDWATER HYDRAULIC MONITORING

In the April 2012 Groundwater, Surface Water, and Sediment Monitoring report [CRA, August 30, 2012], SNFT requested that the hydraulic monitoring frequency of the Lower Intermediate Unit (LIU) and Upper Sharon Unit (USU) units be changed from annual to once every 5 years (during the 5-year expanded groundwater monitoring events), based on the consistent groundwater flow directions observed in the two units over the past 18 years of groundwater hydraulic monitoring at the Site. OEPA agreed that this request was justified in a letter dated October 4, 2012. Therefore, groundwater levels were measured only in the WTU and UIU monitoring wells and piezometers at the Site on April 29, 2013 and are presented in **Attachment E**. **Table E.1 (Attachment E)** lists the groundwater levels measured in the monitoring wells since 2004 (the year prior to shutdown of the groundwater extraction and treatment system). The groundwater hydraulic data were reduced to elevations and entered into a computer database as required by the SOW. Groundwater contours for the April 2013 groundwater hydraulic monitoring event are presented in the figures in **Attachment E**.

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The groundwater elevation contours for the April 2013 hydraulic monitoring demonstrate that the horizontal direction of groundwater flow is generally southeasterly in the WTU, as it has been consistently observed in the past. The groundwater flow direction in the UIU bedrock unit appears to be in a generally easterly direction and is consistent with the pre-shutdown groundwater flow direction in this unit.

Additional 2013 Hydrogeologic Evaluations

CRA conducted a limited hydrogeologic evaluation of the influence of the inactive pipe and media drain on groundwater flow in 2013, as requested by SNFT. This was done to assist in evaluating possible benefits of a limited phytocontrol system for groundwater hydraulic control contemplated by SNFT that has been previously discussed with OEPA and United States Environmental Protection Agency (USEPA). The evaluation included slug testing of select monitoring wells and sampling groundwater from two pipe and media drain manholes. The findings/results are presented in Attachment G.

C. SURFACE WATER AND SEDIMENT SAMPLING

The annual surface water and sediment samples were collected from the confluence of the south and east drainage ditches on April 30, 2013, and analyzed for TCL VOCs and TCL SVOCs. The analytical results of the surface water sample are provided in **Table B.3 (Attachment B)**. The analytical results of the sediment sample are provided in **Table B.4 (Attachment B)**. CRA's data quality assessment for the April 2013 analyses is included in **Attachment C**.

One VOC was reported at a very low, estimated level in the 2013 surface water sample: cis-1,2-Dichloroethene. The concentrations of the detected compounds in the surface water samples from 2004 to 2013 are generally within the historical ranges. **Table F.1 (Attachment F)** provides a summary of the VOCs detected in the surface water samples from 2004 to 2013. A summary comparison of changes from the 2012 surface water samples results for detected VOC compounds is provided below.

Parameters	2012	2013	MCL (µg/L)
cis-1,2-Dichloroethene	1.7/1.8	0.75 J/0.77 J	70

Note: "J" indicates an estimated result below the reporting limit

No semi-volatile organic compounds (SVOCs) have been detected in the surface water samples from 2004 to 2013.



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Three VOCs were detected in the 2013 sediment sample, i.e., acetone, carbon disulfide, and methylene chloride, with all but one of the two acetone results reported at estimated concentrations. Acetone and methylene chloride are common laboratory contaminants. Carbon disulfide can be naturally occurring and may be associated with past coal mining in the area. A summary comparison of changes from the 2012 sediment samples results for detected VOC compounds is provided below.

Parameters	2012	2013
Acetone	ND (26)/ND (23)	63.1/5.6 J
Carbon Disulfide	ND (13)/ND (12)	1.5 J/ND (11)
Methylene Chloride	ND (13)/ND (12)	4.3 J/5.3 J

Note: "J" indicates an estimated result below the reporting limit

Table F.2 (Attachment F) contains a summary of the analytical results of the detected compounds in the sediment sample collected April 2013. **Table F.2** also includes the June 2011 USEPA Regional Screening Levels for Residential and Industrial soil for Chemical Contaminants at Superfund Sites, as well as the mean background soil concentrations from the Record of Decision (USEPA, June 30, 1998). CRA's data quality assessment for the April 2013 analyses is included in **Attachment C**.

Compounds detected in the 2013 sediment sample are primarily SVOCs associated with the past coal mining in the area of the site and were detected at concentrations below the USEPA Screening Level for Industrial and Residential Soil and are at or below the mean background soil concentration identified in the Record of Decision.

D. INSTITUTIONAL CONTROLS - ANNUAL CERTIFICATION

SNFT received USEPA's Fourth Five-Year Review Report (Report) on July 23, 2013. USEPA noted in the Report that the components of the required Institutional Controls (ICs) had been implemented and all that remained was to ensure regular inspections of ICs at the Site. The implemented IC components included mapping and title work and development of an Environmental Covenant (EC). SNFT cooperated with the United States Department of Justice to appoint a receiver to execute an EC on the Vasi property that is the Site. The receiver was appointed by federal district court and the EC was executed and recorded on June 5, 2013 with the Portage County Recorder. The EC, based upon Ohio's Uniform Environmental Covenants Act, further secures activity and use limitations on the Site, grants EPA and the settling



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defendants access to the Site for the purpose of conducting any activity related to the Decree, and specifies that such requirements shall "run with the land" and, hence, be binding upon any future owner of the Site. USEPA determined that an IC Plan was not necessary.

To address the need to conduct regular inspections of ICs at the Site, SNFT responded to USEPA on September 24, 2013 of its intent to monitor the effectiveness of the Site's ICs. SNFT proposed that inspections of the ICs at the Site will be conducted on a quarterly basis and initiated in October 2013. On-Site ICs pertain to monitoring use of land, groundwater, and surface water, along with the Site's remedial components. Inspections will be recorded on the Quarterly Institutional Controls Inspection Report (**Attachment H**) and filed on-Site.

Through submission of this 2013 annual groundwater monitoring report, SNFT certifies that the Institutional Controls are in place and effective.

E. DISCUSSION

Except for the expected increase in groundwater elevations in the vicinity of the pipe and media drain after shutdown of the groundwater extraction system in August 2005, no significant changes in the groundwater flow patterns have been noted since the system shutdown. Groundwater concentrations in downgradient off-Site monitoring wells have remained either non-detect or similar to the concentrations detected since 2004 (baseline sampling event for the shutdown evaluation). The 2013 analytical data indicate very little change in SSIPL concentrations at the wells sampled during the 2013 event.

The contingency actions outlined in the April 2009 Groundwater Monitoring Report (CRA, September 2, 2009), as amended in the Responses to the OEPA January 6, 2010 Comments [CRA, March 26, 2010], are as follows:

"If VOCs above their respective maximum contaminant level (MCL) are detected in the Sentinel wells (off-Site downgradient WTU monitoring wells MW-114 and MW-115), SNFT will evaluate options to mitigate the release (e.g., restart the groundwater extraction system, implement in-situ chemical oxidation (ISCO) to treat the released groundwater, phytoremediation, etc.). The Sentinel wells are located 70 to 80 feet south of the southern property boundary and wet well of the pipe and media drain. During pumping of groundwater from the pipe and media drain, the WTU zone of groundwater capture extends 100 to 200 feet south of the pipe and media drain at the wet well. In this case, off-Site downgradient WTU monitoring wells MW-116, MW-117 and MW-118



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(approximately 230 feet south of the southern property boundary) will be used to verify whether there is any long term impact to the groundwater south of the Site and outside the influence of the pipe and media drain".

As there continue to be no VOC detections at sentinel well MW-114 and the low concentrations for the four VOCs detected at sentinel well MW-115 are consistent with past sampling events and are below their MCLs, no contingency actions are required based on the April 2013 groundwater monitoring data. Therefore, the groundwater extraction system will remain off, pending the results of the 2014 groundwater sampling event.

Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES, INC.

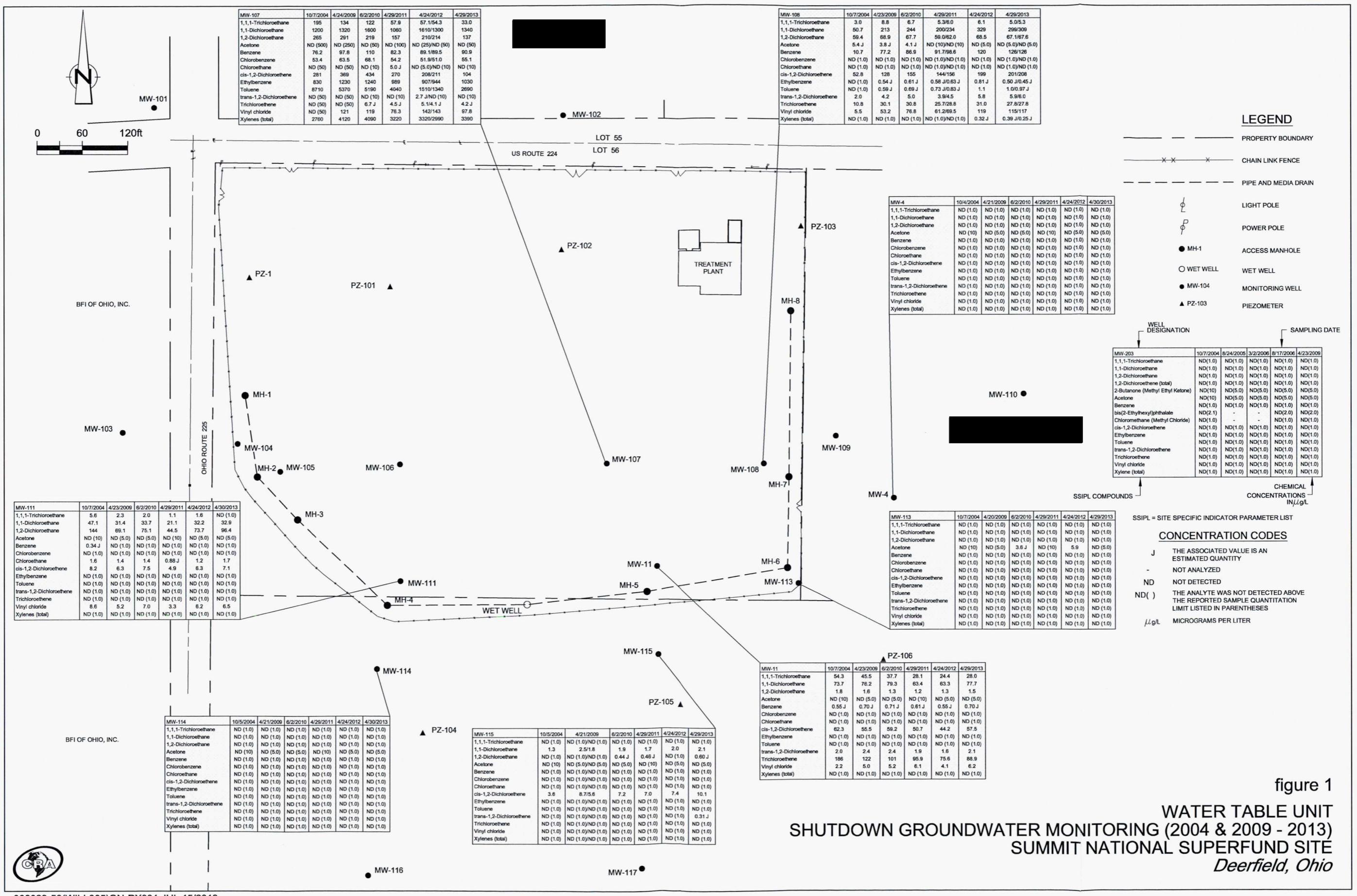
A handwritten signature in blue ink that reads "Nicholas J. Schapman".

Nicholas J. Schapman

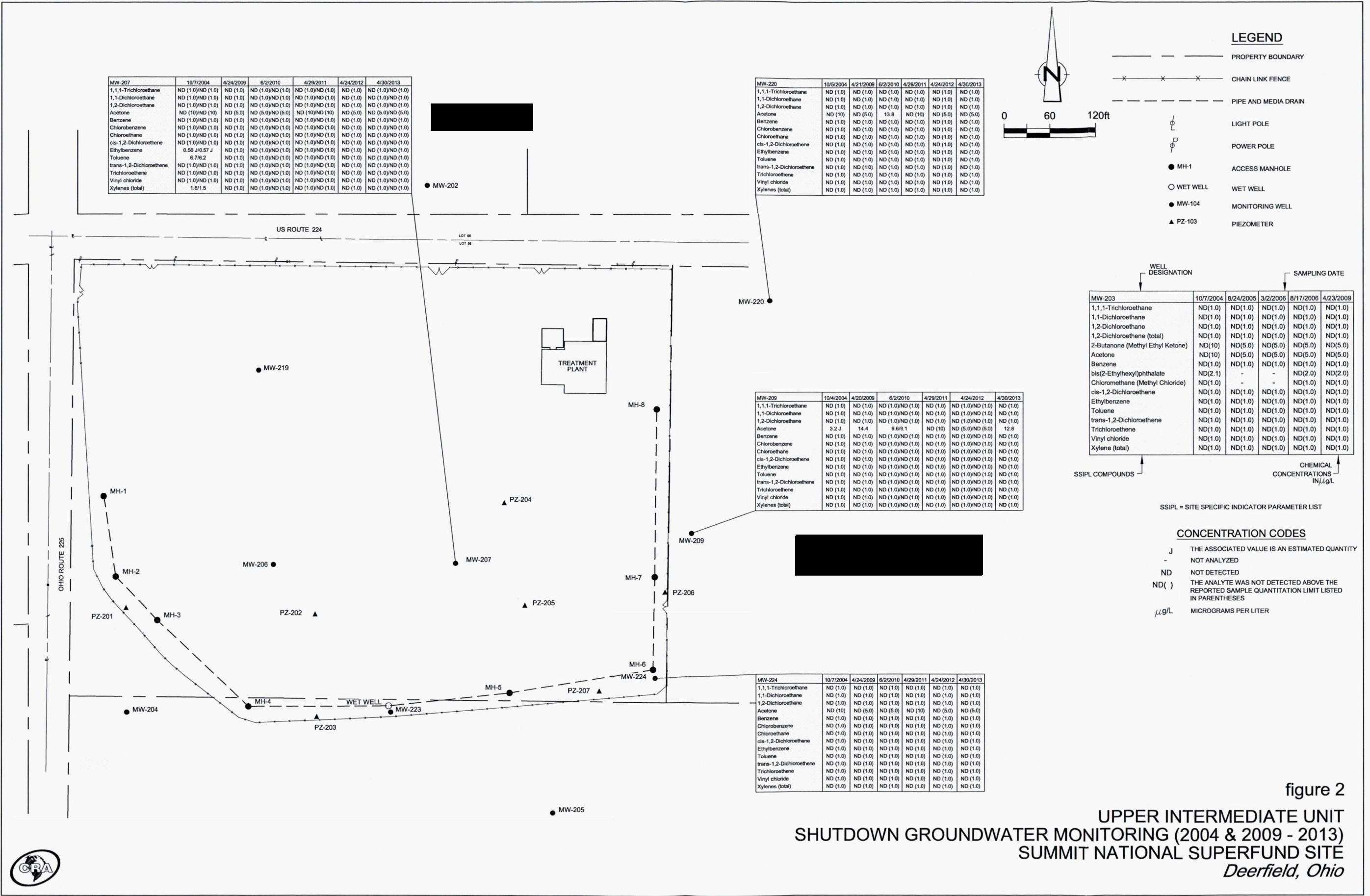
NS/po/WILL-05
Encl.

cc: **Pablo Valentin, USEPA (2 hardcopies, 1 e-copy)**
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Joe Montello, SNFT (e-copy)
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FIGURES



006029-50(WILL005)GN-PX001 JUL 15/2013



TABLE

TABLE 1

SITE-SPECIFIC INDICATOR PARAMETER LIST (2010 - 2013)
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Volatile Organic Compounds (VOCs)

1,1,1-Trichloroethane (1,1,1-TCA)
1,1-Dichloroethane (1,1-DCA)
1,2-Dichloroethane (1,2-DCA)
cis-1,2-Dichloroethene (cis-1,2-DCE)
trans-1,2-Dichloroethene (trans-1,2-DCE)
Acetone
Benzene
Chlorobenzene
Chloroethane
Ethylbenzene
Toluene
Trichloroethene (TCE)
Vinyl Chloride (VC)
Xylenes, Total

ATTACHMENT A

GROUNDWATER MONITORING FIELD ACTIVITIES SUMMARY



**CONESTOGA-ROVERS
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MEMORANDUM

Sent via email

TO: Nicholas Schapman

REF. NO.: 006029-50

FROM: David Tyran/adh/6 *DST*

DATE: May 9, 2013

REVISION: August 19, 2013

C.C.: Stephen Whillier, Nate Ziegler

RE: Post Shutdown Hydraulic Monitoring and Groundwater Quality Monitoring
April 2013
Summit National Superfund Site
Deerfield Township of Portage County, Ohio

The following is a brief summary of the Site activities associated with the April 2013 round of groundwater sampling conducted on April 29 and 30, 2013 at the Summit National Superfund Site (Site) in Deerfield Township of Portage County, Ohio.

On-Site Personnel

Field activities were conducted by Conestoga-Rovers & Associates' (CRA's) Shawn Gardner and Dave Tyran.

Water Levels

A round of water level readings was taken from the on-Site and off-Site monitoring wells on April 29, 2013, using a Solinst electronic water level tape. The water level tape was decontaminated between water level measurements at each monitoring well. The decontamination sequence involved first rinsing the tape with potable water and final rinsing with deionized water.

Purging and Sampling of Monitoring Wells

During purging of the monitoring wells, readings of pH, specific conductivity, temperature, and turbidity (dependent on field observations) were taken after the removal of each standing well volume. A summary of the well purge data is provided in Table 1. The quality of the evacuated water was also noted for color and clarity. Purge waters (approximately 115 gallons) from the monitoring wells were containerized in a 300-gallon tote, which was sampled for characterization prior to off-Site disposal.

Once the monitoring wells were purged, groundwater samples were collected for analyses of the Site-Specific Indicator Parameter List (SSIPL).

Twelve monitoring wells were purged using either dedicated Waterra foot valves and tubing or an electric Grundfos submersible pump. The wells were sampled using a precleaned stainless steel bailer (as detailed

below) or Teflon bailer. Once purging of the monitoring well was completed, the tubing was removed from the well and drained. The standing water within the well was allowed to settle so that a clear sample could be collected. After sampling of the well was completed, the tubing was placed back down the well.

As shown in Table 1, seven out of the twelve wells were purged dry and then allowed to recover so a complete sample set could be taken. The remaining five wells had sufficient recharge to allow for stabilization by purging three or more volumes.

Collected samples were labeled and placed in a cooler and maintained cool with ice. The samples were shipped by Federal Express to Accutest Laboratories in Dayton, New Jersey, under Chain of Custody protocols.

Decontamination Procedures

Stainless steel bailers were cleaned between monitoring wells by using the following decontamination sequence:

- i) Clean with brush in potable water and Alconox detergent
- ii) Rinse thoroughly with potable water
- iii) Rinse thoroughly with deionized water
- iv) Allow the bailer to air dry on clean aluminum foil

Field Quality Assurance/Quality Control (QA/QC) Program

Field QA/QC samples collected during the April 2013 round of groundwater, surface water, and sediment sampling included four blind field duplicates and three rinsate blanks. Four matrix spike and matrix spike duplicates (MS/MSDs) were also collected. In addition, one field blank was collected for the surface water sample. One trip blank was sent with the shipment of aqueous samples to the laboratory by placing the volatile organic compound (VOC) samples in the same cooler with the trip blank.

A second trip blank containing 5 milliliters (mL) of deionized water and a stir bar were sent with the Encore low level samplers for VOC analysis of the sediment samples.

Stainless steel bailer rinsate blanks were collected by pouring lab supplied deionized water into a precleaned bailer and then filling the sample containers.

The surface water field blank was obtained by pouring lab supplied deionized water directly into labeled sample bottles while standing next to the surface water sample location.

The sediment sample rinsate blank was obtained by pouring lab-supplied deionized water into a decontaminated stainless steel bowl and then filling the sample containers.

Surface Water

A surface water sample was collected at the confluence of the south and east ditches. This sample was collected by dipping labeled sample bottles below the surface of the water at the approximate confluence

point. The sample was analyzed for Target Compound List (TCL) VOCs and TCL semi-volatile organic compounds (SVOCs).

Sediment Sample

This sample was obtained by scooping up sediments with a gloved hand at the approximate confluence point of the south and east ditches. The sediment was placed in a stainless steel bowl and homogenized before placing it into labeled sample jars.

Prior to homogenization, the VOC portion of the sample was taken utilizing Encore low level samplers. The sediment sample was analyzed for TCL VOCs and TCL SVOCs.

Monitoring Well Slug Tests

In addition to the annual well sampling, five slug tests were performed to calculate K values on select on-Site and off-Site wells for evaluation of the existing hydrogeologic conditions at the site. Level loggers were installed in monitoring wells MW-11, MW-107, MW-108, MW-113, and MW-115 after completion of the sampling and at least 12 hours prior to the slug tests.

Tests were performed by installing a solid polyvinyl chloride (PVC) slug of known size completely into the water column and monitoring the falling water level with a Heron water level meter. After static conditions were reached, the slug was removed, and the rising water level was again manually monitored and recorded. Where feasible, this sequence was repeated a second time. Upon completion of the tests, the level loggers were removed and transported to the Niagara Falls office where the data was downloaded and distributed.

Additional Sampling

Passive diffusion sample bags were installed in Manholes 5 and 7. The bags were hung on nylon rope and weighted with pre-cleaned stainless steel bars. At each location, the depth of the MH was sounded, and the bags were hung 2 feet off the bottom of the chamber. The bags were installed on April 29, 2013 and removed on May 18, 2013, cut open, and poured into the labeled 40-mL which were sent to the lab along with a set of trip blanks to be analyzed for VOCs.

TABLE 1

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**SUMMARY OF MONITORING WELL PURGE DATA
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
APRIL 2013**

<i>Well I.D.</i>	<i>Date Purged/ Sampled</i>	<i>Well Volume (Gallons)</i>	<i>Purged Volume (Gallons)</i>	<i>Time</i>	<i>Conductivity (ms/cm)</i>	<i>pH</i>	<i>Temperature (°C)</i>	<i>Turbidity (NTU)</i>	<i>Water Quality</i>	<i>Purge/Sampling Method</i>	<i>Comments</i>
MW-4	04/30/13	12.1	12.1	08:45	2.86	5.98	10.83	22.4	Clear, colorless	Grundfos/SS bailer	Well dry @ 10.5 gallons
			Sample	14:00					Clear, colorless	for all parameters	
MW-11	04/29/13	2.8	2.8	16:26	2.60	7.28	11.98	27.2	Clear, colorless	Waterra/Teflon bailer	Good recharge
		5.6	5.6	16:29	2.29	6.79	10.94	19.0	Clear, colorless	for all parameters	
		8.4	8.4	16:32	2.19	6.78	10.92	15.4	Clear, colorless		
		11.2	11.2	16:35	2.16	6.71	10.90	9.5	Clear, colorless		
		Sample	Sample	17:45					Clear, light brown tint		
MW-107	04/29/13	3.4	3.4	15:32	2.63	7.12	12.93	0.0	Clear, colorless - moderate chemical odor	Waterra/SS bailer	Good recharge
		6.8	6.8	15:37	2.74	6.94	11.96	2.7	Clear, colorless - moderate chemical odor	for all parameters	
		10.2	10.2	15:42	2.69	6.87	11.99	9.2	Clear, colorless - moderate chemical odor		
		Sample	Sample	17:55					Clear, colorless - strong chemical odor		
MW-108	04/29/13	2.1	2.1	16:03	1.89	7.02	10.42	463	Cloudy, gray	Waterra/SS bailer	Good recharge
		4.2	4.2	16:05	1.81	6.81	10.55	266	Cloudy, red brown	for all parameters	
		6.3	6.3	16:07	1.88	6.75	10.42	279	Cloudy, red brown		
		Sample	Sample	18:15					Cloudy, red brown		
MW-111	04/30/13	2.7	2.7	09:34	3.61	6.02	13.00	27.7	Clear, colorless	Waterra/SS bailer	Good recharge
		5.4	5.4	09:38	3.65	5.78	12.60	19.1	Clear, colorless	for all parameters	
		8.1	8.1	09:42	3.64	5.75	12.36	13.3	Clear, colorless		
		Sample	Sample	14:10					Clear, colorless		
MW-113	04/29/13	1.9	1.9	15:53	3.65	7.38	10.96	334	Cloudy, gray	Waterra/SS bailer	Well dry @ 4.3 gallons
		3.8	3.8	15:55	3.75	7.11	9.88	997	Cloudy, gray	for all parameters	
		Sample	Sample	18:25					Clear, colorless		

TABLE 1

Page 2 of 2

**SUMMARY OF MONITORING WELL PURGE DATA
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD TOWNSHIP OF PORTAGE COUNTY, OHIO
APRIL 2013**

Well I.D.	Date Purged/ Sampled	Well Volume (Gallons)	Purged Volume (Gallons)	Time	Conductivity (ms/cm)	pH	Temperature (°C)	Turbidity (NTU)	Water Quality	Purge/Sampling Method	Comments
MW-114	04/30/13	2.1	2.1	09:03	2.57	6.11	11.65	197	Cloudy, red brown	Waterra/SS bailer for all parameters	Well dry @ 4 gallons
			Sample	13:10					Clear, colorless		
MW-115	04/29/13	3.9	3.9	14:58	2.49	7.63	13.80	1.7	Clear, colorless	Grundfos/SS bailer for all parameters	Good recharge
		7.8	15:00	2.52	6.91	12.67	0.0		Clear, colorless		
		11.7	15:02	2.49	6.76	12.64	0.0		Clear, colorless		
		15.6	15:03	2.46	6.78	12.54	0.0		Clear, colorless		
		Sample	18:35						Slightly cloudy, light brown		
MW-207	04/30/13	6.4	6.4	10:33	3.19	6.43	12.66	96.4	Cloudy, dark gray	Grundfos/SS bailer for all parameters	Well dry @ 15 gallons
		12.8	10:35	3.25	6.08	12.32	174		Cloudy, dark gray		
		Sample	14:20						Clear, colorless		
MW-209	04/30/13	5.2	5.2	07:54	3.00	5.99	10.50	69.6	Slight cloudy, light brown	Grundfos/SS bailer	Well dry @ 9 gallons
		Sample	13:30						Clear, light brown tint		
MW-220	04/30/13	4.9	4.9	07:26	3.59	6.03	10.76	23.9	Clear, colorless	Grundfos/SS bailer	Well dry @ 8.5 gallons
		Sample	13:50						Clear, colorless		
MW-224	04/30/13	4.1	4.1	10:02	3.55	5.88	12.75	5.3	Clear, colorless	Grundfos/SS bailer for all parameters	Well dry @ 12 gallons
		8.2	10:04	3.50	6.08	12.33	17.3		Clear, colorless		
		Sample	13:40						Clear, colorless		
Surface Water	04/30/13		Sample	14:45	0.929	7.06	23.08	68.5	Slightly cloudy, light brown	Grab sample	
Sediment	04/30/13		Sample	15:15						Grab sample	

Notes:

NM - Not measured.

SS - Stainless Steel.

ATTACHMENT B

ANALYTICAL DATA SUMMARY

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TABLE B.1

**ANALYTICAL DATA SUMMARY
WTU MONITORING WELLS**
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Sample Location:	MW-4	MW-11	MW-107	MW-108	MW-108	MW-111	MW-113	MW-114	MW-115
Sample ID:	WG-6029-043013-013	WG-6029-042913-001	WG-6029-042913-002	WG-6029-042913-003	WG-6029-042913-004	WG-6029-043013-014	WG-6029-042913-005	WG-6029-043013-008	WG-6029-042913-006
Sample Date:	4/30/2013	4/29/2013	4/29/2013	4/29/2013	4/29/2013	4/30/2013	4/29/2013	4/30/2013	4/29/2013
Parameters									
Units									
Volatile Organic Compounds									
1,1,1-Trichloroethane	ug/L	ND (1.0)	28.0	33.0	5.0	5.3	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)	77.7	1340	299	309	32.9	ND (1.0)	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)	1.5	137	67.1	67.6	96.4	ND (1.0)	ND (1.0)
Acetone	ug/L	ND (5.0)	ND (5.0)	ND (50)	ND (5.0)				
Benzene	ug/L	ND (1.0)	0.70 J	90.9	126	126	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)	ND (1.0)	55.1	ND (1.0)				
Chloroethane	ug/L	ND (1.0)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	1.7	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	ug/L	ND (1.0)	57.5	104	201	208	7.1	ND (1.0)	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)	ND (1.0)	1030	0.50 J	0.45 J	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	ug/L	ND (1.0)	ND (1.0)	2690	1.0	0.97 J	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)	2.1	ND (10)	5.9	6.0	ND (1.0)	ND (1.0)	0.31 J
Trichloroethylene	ug/L	ND (1.0)	88.9	4.2 J	27.8	27.8	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)	6.2	97.8	115	117	6.5	ND (1.0)	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)	ND (1.0)	3390	0.39 J	0.25 J	ND (1.0)	ND (1.0)	ND (1.0)

Notes

ND - Not detected at the associated reporting limit

J - Estimated concentration

TABLE B.2

Page 1 of 1

**ANALYTICAL DATA SUMMARY
UIU MONITORING WELLS
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<i>Sample Location:</i>	<i>MW-207</i>	<i>MW-207</i>	<i>MW-209</i>	<i>MW-220</i>	<i>MW-224</i>
<i>Sample ID:</i>	WG-6029-043013-009	WG-6029-043013-015	WG-6029-043013-010	WG-6029-043013-012	WG-6029-043013-011
<i>Sample Date:</i>	4/30/2013	4/30/2013	4/30/2013	4/30/2013	4/30/2013
<i>Parameters</i>					
	<i>Units</i>				
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Acetone	ug/L	ND (5.0)	ND (5.0)	12.8	ND (5.0)
Benzene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)

Notes

ND - Not detected at the associated reporting limit

TABLE B.3

**ANALYTICAL DATA SUMMARY
SURFACE WATER SAMPLE
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<i>Sample Location:</i>	<i>S&E Ditches Surface Water</i>	<i>S&E Ditches Surface Water</i>
<i>Sample ID:</i>	WS-6029-043013-017	WS-6029-043013-018
<i>Sample Date:</i>	4/30/2013	4/30/2013
<i>Parameters</i>		<i>Units</i>
<i>Volatile Organic Compounds</i>		
1,1,1-Trichloroethane	ug/L	ND (1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND (1.0)
1,1,2-Trichloroethane	ug/L	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)
1,1-Dichloroethene	ug/L	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)
1,2-Dichloroethene (total)	ug/L	0.75 J
1,2-Dichloropropane	ug/L	ND (1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	ND (5.0)
2-Hexanone	ug/L	ND (5.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	ND (5.0)
Acetone	ug/L	ND (5.0)
Benzene	ug/L	ND (1.0)
Bromodichloromethane	ug/L	ND (1.0)
Bromoform	ug/L	ND (4.0)
Bromomethane (Methyl bromide)	ug/L	ND (2.0)
Carbon disulfide	ug/L	ND (2.0)
Carbon tetrachloride	ug/L	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)
Chloroethane	ug/L	ND (1.0)
Chloroform (Trichloromethane)	ug/L	ND (1.0)
Chloromethane (Methyl chloride)	ug/L	ND (1.0)
cis-1,2-Dichloroethene	ug/L	0.75 J
cis-1,3-Dichloropropene	ug/L	ND (1.0)
Dibromochloromethane	ug/L	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)
Methylene chloride	ug/L	ND (2.0)
Styrene	ug/L	ND (5.0)
Tetrachloroethene	ug/L	ND (1.0)
Toluene	ug/L	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)
trans-1,3-Dichloropropene	ug/L	ND (1.0)
Trichloroethene	ug/L	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)
<i>Semivolatile Organic Compounds</i>		
1,2,4-Trichlorobenzene	ug/L	ND (5.0)
1,2-Dichlorobenzene	ug/L	ND (5.0)
1,3-Dichlorobenzene	ug/L	ND (5.0)
1,4-Dichlorobenzene	ug/L	ND (5.0)
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	ND (5.0)
2,4,5-Trichlorophenol	ug/L	ND (5.0)
2,4,6-Trichlorophenol	ug/L	ND (5.0)
2,4-Dichlorophenol	ug/L	ND (5.0)
2,4-Dimethylphenol	ug/L	ND (5.0)
2,4-Dinitrophenol	ug/L	ND (25)
2,4-Dinitrotoluene	ug/L	ND (5.0)
2,6-Dinitrotoluene	ug/L	ND (5.0)
2-Chloronaphthalene	ug/L	ND (5.0)
2-Chlorophenol	ug/L	ND (5.0)
2-Methylnaphthalene	ug/L	ND (5.0)
2-Methylphenol	ug/L	ND (5.0)

TABLE B.3

**ANALYTICAL DATA SUMMARY
SURFACE WATER SAMPLE
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<i>Sample Location:</i>	<i>S&E Ditches Surface Water</i>	<i>S&E Ditches Surface Water</i>
<i>Sample ID:</i>	WS-6029-043013-017	WS-6029-043013-018
<i>Sample Date:</i>	4/30/2013	4/30/2013
Parameters		
2-Nitroaniline	ug/L	ND (5.0)
2-Nitrophenol	ug/L	ND (5.0)
3&4-Methylphenol	ug/L	ND (5.0)
3,3'-Dichlorobenzidine	ug/L	ND (5.0)
3-Nitroaniline	ug/L	ND (5.0)
4,6-Dinitro-2-methylphenol	ug/L	ND (10)
4-Bromophenyl phenyl ether	ug/L	ND (5.0)
4-Chloro-3-methylphenol	ug/L	ND (5.0)
4-Chloroaniline	ug/L	ND (5.0)
4-Chlorophenyl phenyl ether	ug/L	ND (5.0)
4-Nitroaniline	ug/L	ND (5.0)
4-Nitrophenol	ug/L	ND (25)
Acenaphthene	ug/L	ND (5.0)
Acenaphthylene	ug/L	ND (5.0)
Anthracene	ug/L	ND (5.0)
Benz(a)anthracene	ug/L	ND (5.0)
Benz(a)pyrene	ug/L	ND (5.0)
Benz(b)fluoranthene	ug/L	ND (5.0)
Benz(g,h,i)perylene	ug/L	ND (5.0)
Benz(k)fluoranthene	ug/L	ND (5.0)
bis(2-Chloroethoxy)methane	ug/L	ND (5.0)
bis(2-Chloroethyl)ether	ug/L	ND (5.0)
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	ND (5.0)
Butyl benzylphthalate (BBP)	ug/L	ND (5.0)
Carbazole	ug/L	ND (5.0)
Chrysene	ug/L	ND (5.0)
Dibenz(a,h)anthracene	ug/L	ND (5.0)
Dibenzofuran	ug/L	ND (5.0)
Diethyl phthalate	ug/L	ND (5.0)
Dimethyl phthalate	ug/L	ND (5.0)
Di-n-butylphthalate (DBP)	ug/L	ND (5.0)
Di-n-octyl phthalate (DnOP)	ug/L	ND (5.0)
Fluoranthene	ug/L	ND (5.0)
Fluorene	ug/L	ND (5.0)
Hexachlorobenzene	ug/L	ND (5.0)
Hexachlorobutadiene	ug/L	ND (5.0)
Hexachlorocyclopentadiene	ug/L	ND (5.0)
Hexachloroethane	ug/L	ND (5.0)
Indeno(1,2,3-cd)pyrene	ug/L	ND (5.0)
Isophorone	ug/L	ND (5.0)
Naphthalene	ug/L	ND (5.0)
Nitrobenzene	ug/L	ND (5.0)
N-Nitrosodi-n-propylamine	ug/L	ND (5.0)
N-Nitrosodiphenylamine	ug/L	ND (5.0)
Pentachlorophenol	ug/L	ND (25)
Phenanthrene	ug/L	ND (5.0)
Phenol	ug/L	ND (5.0)
Pyrene	ug/L	ND (5.0)

Notes

ND - Not detected at the associated reporting limit

J - Estimated concentration

TABLE B.4
ANALYTICAL DATA SUMMARY
SEDIMENT SAMPLE
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Sample Location:	S&E Ditches Sediment	S&E Ditches Sediment
Sample ID:	SE-6029-043013-020	SE-6029-043013-021
Sample Date:	4/30/2013	4/30/2013
Parameters	Units	
Volatile Organic Compounds		
1,1,1-Trichloroethane	ug/kg	ND (11)
1,1,2,2-Tetrachloroethane	ug/kg	ND (11)
1,1,2-Trichloroethane	ug/kg	ND (11)
1,1-Dichloroethane	ug/kg	ND (11)
1,1-Dichloroethene	ug/kg	ND (11)
1,2-Dichloroethane	ug/kg	ND (2.2)
1,2-Dichloroethene (total)	ug/kg	ND (11)
1,2-Dichloropropane	ug/kg	ND (11)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/kg	ND (22)
2-Hexanone	ug/kg	ND (11)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/kg	ND (11)
Acetone	ug/kg	63.1
Benzene	ug/kg	ND (2.2)
Bromodichloromethane	ug/kg	ND (11)
Bromoform	ug/kg	ND (11)
Bromomethane (Methyl bromide)	ug/kg	ND (11)
Carbon disulfide	ug/kg	1.5 J
Carbon tetrachloride	ug/kg	ND (11)
Chlorobenzene	ug/kg	ND (11)
Chloroethane	ug/kg	ND (11)
Chloroform (Trichloromethane)	ug/kg	ND (11)
Chloromethane (Methyl chloride)	ug/kg	ND (11)
cis-1,2-Dichloroethene	ug/kg	ND (11)
cis-1,3-Dichloropropene	ug/kg	ND (11)
Dibromochloromethane	ug/kg	ND (11)
Ethylbenzene	ug/kg	ND (2.2)
Methylene chloride	ug/kg	4.3 J
Styrene	ug/kg	ND (11)
Tetrachloroethene	ug/kg	ND (11)
Toluene	ug/kg	ND (2.2)
trans-1,2-Dichloroethene	ug/kg	ND (11)
trans-1,3-Dichloropropene	ug/kg	ND (11)
Trichloroethene	ug/kg	ND (11)
Vinyl chloride	ug/kg	ND (11)
Xylenes (total)	ug/kg	ND (2.2)
Semivolatile Organic Compounds		
1,2,4-Trichlorobenzene	ug/kg	ND (330)
1,2-Dichlorobenzene	ug/kg	ND (330)
1,3-Dichlorobenzene	ug/kg	ND (330)
1,4-Dichlorobenzene	ug/kg	ND (330)
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/kg	ND (330)
2,4,5-Trichlorophenol	ug/kg	ND (330)
2,4,6-Trichlorophenol	ug/kg	ND (330)
2,4-Dichlorophenol	ug/kg	ND (330)
2,4-Dimethylphenol	ug/kg	ND (330)
2,4-Dinitrophenol	ug/kg	ND (1700)
2,4-Dinitrotoluene	ug/kg	ND (330)
2,6-Dinitrotoluene	ug/kg	ND (330)
2-Chloronaphthalene	ug/kg	ND (330)
2-Chlorophenol	ug/kg	ND (330)
2-Methylnaphthalene	ug/kg	117 J
2-Methylphenol	ug/kg	83.3 J
2-Nitroaniline	ug/kg	ND (330)
2-Nitrophenol	ug/kg	ND (330)
3&4-Methylphenol	ug/kg	ND (330)
3,3'-Dichlorobenzidine	ug/kg	ND (330)
3-Nitroaniline	ug/kg	ND (330)
4,6-Dinitro-2-methylphenol	ug/kg	ND (670)
4-Bromophenyl phenyl ether	ug/kg	ND (330)
4-Chloro-3-methylphenol	ug/kg	ND (330) J
4-Chloroaniline	ug/kg	ND (330)
4-Chlorophenyl phenyl ether	ug/kg	ND (330)
4-Nitroaniline	ug/kg	ND (330)
4-Nitrophenol	ug/kg	ND (1700)
Acenaphthene	ug/kg	ND (330)
Acenaphthylene	ug/kg	ND (330)
Anthracene	ug/kg	ND (330)
Benzo(a)anthracene	ug/kg	37.8 J
Benzo(a)pyrene	ug/kg	35.0 J
Benzo(b)fluoranthene	ug/kg	64.4 J
Benzo(g,h,i)perylene	ug/kg	35.4 J

TABLE B.4

Page 2 of 2

**ANALYTICAL DATA SUMMARY
SEDIMENT SAMPLE**
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Location:</i>	<i>S&E Ditches Sediment</i>	<i>S&E Ditches Sediment</i>
<i>Sample ID:</i>	SE-6029-043013-020	SE-6029-043013-021
<i>Sample Date:</i>	4/30/2013	4/30/2013
Parameters		
Benzo(k)fluoranthene	ug/kg	ND (330)
bis(2-Chloroethoxy)methane	ug/kg	ND (330)
bis(2-Chloroethyl)ether	ug/kg	ND (330) J
bis(2-Ethylhexyl)phthalate (DEHP)	ug/kg	ND (670)
Butyl benzyl phthalate (BBP)	ug/kg	ND (330)
Carbazole	ug/kg	ND (330)
Chrysene	ug/kg	46.1 J
Dibenz(a,h)anthracene	ug/kg	ND (330)
Dibenzofuran	ug/kg	ND (330)
Diethyl phthalate	ug/kg	ND (670)
Dimethyl phthalate	ug/kg	ND (330)
Di-n-butylphthalate (DBP)	ug/kg	ND (670)
Di-n-octyl phthalate (DnOP)	ug/kg	ND (330)
Fluoranthene	ug/kg	65.2 J
Fluorene	ug/kg	ND (330)
Hexachlorobenzene	ug/kg	ND (330)
Hexachlorobutadiene	ug/kg	ND (330)
Hexachlorocyclopentadiene	ug/kg	ND (330) J
Hexachloroethane	ug/kg	ND (330)
Indeno(1,2,3-cd)pyrene	ug/kg	ND (330)
Isophorone	ug/kg	ND (330)
Naphthalene	ug/kg	295 J
Nitrobenzene	ug/kg	ND (330)
N-Nitrosodi-n-propylamine	ug/kg	ND (330) J
N-Nitrosodiphenylamine	ug/kg	ND (330)
Pentachlorophenol	ug/kg	ND (1700)
Phenanthrene	ug/kg	67.1 J
Phenol	ug/kg	ND (330)
Pyrene	ug/kg	64.1 J
General Chemistry		
Total solids	%	50.4
		59.3

Notes

ND - Not detected at the associated reporting limit
J - Estimated concentration
NDJ - Not detected, associated reporting limit is estimated

TABLE B.5

Page 1 of 1

ANALYTICAL DATA SUMMARY
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Location:</i>	<i>Rinse Blank</i>	<i>Rinse Blank</i>
<i>Sample ID:</i>	RB-6029-042913-007	RB-6029-043013-016
<i>Sample Date:</i>	4/29/2013	4/30/2013
Parameters		Units
Volatile Organic Compounds		
1,1,1-Trichloroethane	ug/L	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)
Acetone	ug/L	ND (5.0)
Benzene	ug/L	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)
Chloroethane	ug/L	ND (1.0)
cis-1,2-Dichloroethene	ug/L	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)
Toluene	ug/L	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)
Trichloroethene	ug/L	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)

Notes

ND - Not detected at the associated reporting limit

TABLE B.6

**ANALYTICAL DATA SUMMARY
RINSE BLANK - SEDIMENT
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<i>Sample Location:</i>	<i>Rinse Blank</i>
<i>Sample ID:</i>	RB-6029-043013-022
<i>Sample Date:</i>	4/30/2013
<i>Parameters</i>	<i>Units</i>
Volatile Organic Compounds	
1,1,1-Trichloroethane	ug/L
1,1,2,2-Tetrachloroethane	ug/L
1,1,2-Trichloroethane	ug/L
1,1-Dichloroethane	ug/L
1,1-Dichloroethene	ug/L
1,2-Dichloroethane	ug/L
1,2-Dichloroethene (total)	ug/L
1,2-Dichloropropane	ug/L
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L
2-Hexanone	ug/L
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L
Acetone	ug/L
Benzene	ug/L
Bromodichloromethane	ug/L
Bromoform	ug/L
Bromomethane (Methyl bromide)	ug/L
Carbon disulfide	ug/L
Carbon tetrachloride	ug/L
Chlorobenzene	ug/L
Chloroethane	ug/L
Chloroform (Trichloromethane)	ug/L
Chloromethane (Methyl chloride)	ug/L
cis-1,2-Dichloroethene	ug/L
cis-1,3-Dichloropropene	ug/L
Dibromochloromethane	ug/L
Ethylbenzene	ug/L
Methylene chloride	ug/L
Styrene	ug/L
Tetrachloroethene	ug/L
Toluene	ug/L
trans-1,2-Dichloroethene	ug/L
trans-1,3-Dichloropropene	ug/L
Trichloroethene	ug/L
Vinyl chloride	ug/L
Xylenes (total)	ug/L
Semivolatile Organic Compounds	
1,2,4-Trichlorobenzene	ug/L
1,2-Dichlorobenzene	ug/L
1,3-Dichlorobenzene	ug/L
1,4-Dichlorobenzene	ug/L
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L
2,4,5-Trichlorophenol	ug/L
2,4,6-Trichlorophenol	ug/L
2,4-Dichlorophenol	ug/L
2,4-Dimethylphenol	ug/L
2,4-Dinitrophenol	ug/L
2,4-Dinitrotoluene	ug/L
2,6-Dinitrotoluene	ug/L
2-Chloronaphthalene	ug/L
2-Chlorophenol	ug/L
2-Methylnaphthalene	ug/L
2-Methylphenol	ug/L
2-Nitroaniline	ug/L
2-Nitrophenol	ug/L
3&4-Methylphenol	ug/L
3,3'-Dichlorobenzidine	ug/L
3-Nitroaniline	ug/L
4,6-Dinitro-2-methylphenol	ug/L
4-Bromophenyl phenyl ether	ug/L
4-Chloro-3-methylphenol	ug/L
4-Chloroaniline	ug/L
4-Chlorophenyl phenyl ether	ug/L
4-Nitroaniline	ug/L
4-Nitrophenol	ug/L
Acenaphthene	ug/L
Acenaphthylene	ug/L
Anthracene	ug/L
Benzo(a)anthracene	ug/L
Benzo(a)pyrene	ug/L
Benzo(b)fluoranthene	ug/L
Benzo(g,h,i)perylene	ug/L
Benzo(k)fluoranthene	ug/L

TABLE B.6

**ANALYTICAL DATA SUMMARY
RINSE BLANK - SEDIMENT**
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Location:</i>	<i>Rinse Blank</i>	
<i>Sample ID:</i>	RB-6029-043013-022	
<i>Sample Date:</i>	4/30/2013	
<i>Parameters</i>	<i>Units</i>	
bis(2-Chloroethoxy)methane	ug/L	ND (5.0)
bis(2-Chloroethyl)ether	ug/L	ND (5.0)
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	ND (5.0)
Butyl benzylphthalate (BBP)	ug/L	ND (5.0)
Carbazole	ug/L	ND (5.0)
Chrysene	ug/L	ND (5.0)
Dibenz(a,h)anthracene	ug/L	ND (5.0)
Dibenzofuran	ug/L	ND (5.0)
Diethyl phthalate	ug/L	ND (5.0)
Dimethyl phthalate	ug/L	ND (5.0)
Di-n-butylphthalate (DBP)	ug/L	ND (5.0)
Di-n-octyl phthalate (DnOP)	ug/L	ND (5.0)
Fluoranthene	ug/L	ND (5.0)
Fluorene	ug/L	ND (5.0)
Hexachlorobenzene	ug/L	ND (5.0)
Hexachlorobutadiene	ug/L	ND (5.0)
Hexachlorocyclopentadiene	ug/L	ND (5.0)
Hexachloroethane	ug/L	ND (5.0)
Indeno(1,2,3-cd)pyrene	ug/L	ND (5.0)
Isophorone	ug/L	ND (5.0)
Naphthalene	ug/L	ND (5.0)
Nitrobenzene	ug/L	ND (5.0)
N-Nitrosodi-n-propylamine	ug/L	ND (5.0)
N-Nitrosodiphenylamine	ug/L	ND (5.0)
Pentachlorophenol	ug/L	ND (25)
Phenanthrene	ug/L	ND (5.0)
Phenol	ug/L	ND (5.0)
Pyrene	ug/L	ND (5.0)

Notes

ND - Not detected at the associated reporting limit

TABLE B.7

**ANALYTICAL DATA SUMMARY
FIELD BLANK - SURFACE WATER**
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Location:</i>	<i>Field Blank</i>	
<i>Sample ID:</i>	FB-6029-043013-019	
<i>Sample Date:</i>	4/30/2013	
<i>Parameters</i>		<i>Units</i>
Volatile Organic Compounds		
1,1,1-Trichloroethane	ug/L	ND (1.0)
1,1,2,2-Tetrachloroethane	ug/L	ND (1.0)
1,1,2-Trichloroethane	ug/L	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)
1,1-Dichloroethene	ug/L	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)
1,2-Dichloroethene (total)	ug/L	ND (1.0)
1,2-Dichloropropane	ug/L	ND (1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	ug/L	ND (5.0)
2-Hexanone	ug/L	ND (5.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	ug/L	ND (5.0)
Acetone	ug/L	ND (5.0)
Benzene	ug/L	ND (1.0)
Bromodichloromethane	ug/L	ND (1.0)
Bromoform	ug/L	ND (4.0)
Bromomethane (Methyl bromide)	ug/L	ND (2.0)
Carbon disulfide	ug/L	ND (2.0)
Carbon tetrachloride	ug/L	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)
Chloroethane	ug/L	ND (1.0)
Chloroform (Trichloromethane)	ug/L	ND (1.0)
Chloromethane (Methyl chloride)	ug/L	ND (1.0)
cis-1,2-Dichloroethene	ug/L	ND (1.0)
cis-1,3-Dichloropropene	ug/L	ND (1.0)
Dibromochloromethane	ug/L	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)
Methylene chloride	ug/L	ND (2.0)
Styrene	ug/L	ND (5.0)
Tetrachloroethene	ug/L	ND (1.0)
Toluene	ug/L	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)
trans-1,3-Dichloropropene	ug/L	ND (1.0)
Trichloroethene	ug/L	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)
Semivolatile Organic Compounds		
1,2,4-Trichlorobenzene	ug/L	ND (5.0)
1,2-Dichlorobenzene	ug/L	ND (5.0)
1,3-Dichlorobenzene	ug/L	ND (5.0)
1,4-Dichlorobenzene	ug/L	ND (5.0)
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	ug/L	ND (5.0)
2,4,5-Trichlorophenol	ug/L	ND (5.0)
2,4,6-Trichlorophenol	ug/L	ND (5.0)
2,4-Dichlorophenol	ug/L	ND (5.0)
2,4-Dimethylphenol	ug/L	ND (5.0)
2,4-Dinitrophenol	ug/L	ND (25)
2,4-Dinitrotoluene	ug/L	ND (5.0)
2,6-Dinitrotoluene	ug/L	ND (5.0)
2-Chloronaphthalene	ug/L	ND (5.0)
2-Chlorophenol	ug/L	ND (5.0)
2-Methylnaphthalene	ug/L	ND (5.0)
2-Methylphenol	ug/L	ND (5.0)
2-Nitroaniline	ug/L	ND (5.0)
2-Nitrophenol	ug/L	ND (5.0)
3&4-Methylphenol	ug/L	ND (5.0)
3,3'-Dichlorobenzidine	ug/L	ND (5.0)
3-Nitroaniline	ug/L	ND (5.0)
4,6-Dinitro-2-methylphenol	ug/L	ND (10)
4-Bromophenyl phenyl ether	ug/L	ND (5.0)
4-Chloro-3-methylphenol	ug/L	ND (5.0)
4-Chloroaniline	ug/L	ND (5.0)
4-Chlorophenyl phenyl ether	ug/L	ND (5.0)
4-Nitroaniline	ug/L	ND (5.0)
4-Nitrophenol	ug/L	ND (25)
Acenaphthene	ug/L	ND (5.0)
Acenaphthylene	ug/L	ND (5.0)
Anthracene	ug/L	ND (5.0)
Benzo(a)anthracene	ug/L	ND (5.0)
Benzo(a)pyrene	ug/L	ND (5.0)
Benzo(b)fluoranthene	ug/L	ND (5.0)
Benzo(g,h,i)perylene	ug/L	ND (5.0)
Benzo(k)fluoranthene	ug/L	ND (5.0)

TABLE B.7

Page 2 of 2

**ANALYTICAL DATA SUMMARY
FIELD BLANK - SURFACE WATER
APRIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

<i>Sample Location:</i>	<i>Field Blank</i>	
<i>Sample ID:</i>	FB-6029-043013-019	
<i>Sample Date:</i>	4/30/2013	
Parameters		
bis(2-Chloroethoxy)methane	ug/L	ND (5.0)
bis(2-Chloroethyl)ether	ug/L	ND (5.0)
bis(2-Ethylhexyl)phthalate (DEHP)	ug/L	ND (5.0)
Butyl benzylphthalate (BBP)	ug/L	ND (5.0)
Carbazole	ug/L	ND (5.0)
Chrysene	ug/L	ND (5.0)
Dibenz(a,h)anthracene	ug/L	ND (5.0)
Dibenzofuran	ug/L	ND (5.0)
Diethyl phthalate	ug/L	ND (5.0)
Dimethyl phthalate	ug/L	ND (5.0)
Di-n-butylphthalate (DBP)	ug/L	ND (5.0)
Di-n-octyl phthalate (DnOP)	ug/L	ND (5.0)
Fluoranthene	ug/L	ND (5.0)
Fluorene	ug/L	ND (5.0)
Hexachlorobenzene	ug/L	ND (5.0)
Hexachlorobutadiene	ug/L	ND (5.0)
Hexachlorocyclopentadiene	ug/L	ND (5.0)
Hexachloroethane	ug/L	ND (5.0)
Indeno(1,2,3-cd)pyrene	ug/L	ND (5.0)
Isophorone	ug/L	ND (5.0)
Naphthalene	ug/L	ND (5.0)
Nitrobenzene	ug/L	ND (5.0)
N-Nitrosodi-n-propylamine	ug/L	ND (5.0)
N-Nitrosodiphenylamine	ug/L	ND (5.0)
Pentachlorophenol	ug/L	ND (25)
Phenanthrene	ug/L	ND (5.0)
Phenol	ug/L	ND (5.0)
Pyrene	ug/L	ND (5.0)

Notes

ND - Not detected at the associated reporting limit

TABLE B.8

Page 1 of 1

**ANALYTICAL DATA SUMMARY
TRIP BLANK**
ARPIL 2013 GROUNDWATER MONITORING EVENT
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Sample Location:**Trip Blank****Sample ID:****TB-6029-042913****Sample Date:****4/30/2013****Trip Blank****TB-6029-051813****5/18/2013****Parameters****Units****Volatile Organic Compounds**

1,1,1-Trichloroethane	ug/L	ND (1.0)	ND (1.0)
1,1-Dichloroethane	ug/L	ND (1.0)	ND (1.0)
1,2-Dichloroethane	ug/L	ND (1.0)	ND (1.0)
Acetone	ug/L	ND (5.0)	ND (5.0)
Benzene	ug/L	ND (1.0)	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	ug/L	ND (1.0)	ND (1.0)
Ethylbenzene	ug/L	ND (1.0)	ND (1.0)
Toluene	ug/L	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)	ND (1.0)
Trichloroethene	ug/L	ND (1.0)	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)	ND (1.0)

Notes

ND - Not detected at the associated reporting limit

ATTACHMENT C

DATA QUALITY ASSESSMENT



**CONESTOGA-ROVERS
& ASSOCIATES**

9033 Meridian Way, West Chester, Ohio 45069
Telephone: (513) 942-4750 Fax: (513) 942-8585
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MEMORANDUM

TO: Nick Schapmann

REF. NO.: 006029

FROM: Deborah Brennan/bjw/7-NF DB/bjw

DATE: June 20, 2013

REVISION: August 16, 2013

CC: Nate Ziegler

E-Mail and Hard Copy if Requested

RE: **Analytical Results and Reduced Validation
Annual Groundwater, Surface Water, and Sediment Sampling Event and Manhole Sampling
Summit National Superfund Site
Deerfield, Ohio
April and May, 2013**

INTRODUCTION

The following document details a reduced validation of analytical results for groundwater, surface water, and sediment samples collected in support of the Annual Groundwater Monitoring Event and manhole sampling at the Summit National Superfund Site during April and May, 2013. Samples were submitted to Accutest Laboratory in Dayton, New Jersey. All analyses for the purge water as well as the semi-volatile organic compounds (SVOCs) for the sediment and surface water were analyzed at Accutest Laboratory in Orlando, Florida. All other analyses were completed in the Dayton, New Jersey laboratory. A sample collection and analysis summary is presented in Table 1. The validated analytical results are summarized in Tables 2A (groundwater), 2B (surface water), and 2C (sediment). A summary of the analytical methodologies is presented in Table 3. Copies of the chain of custody documentation can be found in Attachment A.

The results of the purge water sampling are included for reference and informational purposes. No data validation or review was conducted on this sample. The results are summarized in Table 2D.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS), and matrix spikes; and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and the document entitled:

- i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

CRA MEMORANDUM

Item i) will subsequently be referred to as the "Guidelines" in this memorandum.

SAMPLE HOLDING TIME AND PRESERVATION

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 3. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (0-6°C).

METHOD BLANK ANALYSES

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, method blanks were analyzed at a minimum frequency of one per 20 investigative samples or one per analytical batch.

Most method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation. One method blank had a detectable result for diethyl phthalate. However, all associated analytical results were non-detects. No qualification of data was needed on this basis.

SURROGATE SPIKE RECOVERIES - ORGANIC ANALYSES

In accordance with the methods employed, all samples, blanks and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for volatile organic compounds (VOCs) and SVOCs determinations were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

LABORATORY CONTROL SAMPLE (LCS) ANALYSES

LCS are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects.

CRA MEMORANDUM

For this study, LCS were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

The LCS contained all compounds of interest. All LCS recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES – ORGANIC ANALYSES

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The relative percent difference (RPD) between the MS and MSD is used to assess analytical precision. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed.

MS/MSD analyses were performed as specified in Table 1. The laboratory performed additional site-specific MS/MSD analyses internally.

The MS/MSD samples were spiked with all compounds of interest. Most percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision. Those results that did not meet the laboratory established control limits were qualified as shown in Table 4.

FIELD QA/QC SAMPLES

The field QA/QC consisted of three trip blank samples, three equipment blank samples, one field blank sample, and four field duplicate sample sets.

Trip Blank Sample Analysis

To evaluate contamination from sample collection, transportation, storage, and analytical activities, three trip blanks were submitted to the laboratory for VOC analysis. All results were non-detect for the compounds of interest.

Equipment Blank Sample Analysis

To assess field decontamination procedures, ambient conditions at the site, and cleanliness of sample containers, three equipment blanks were submitted for analysis, as identified in Table 1. All results were non-detect for the analytes of interest.

Field Blank Sample Analysis

One field blank was collected and submitted for analysis (see Table 1). The field blank analysis evaluates any ambient contamination that may be present during sampling.

All results were non-detect for the compounds of interest.

CRA MEMORANDUM

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, four field duplicate samples were collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil/sediment samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one or two times the PQL value for water and soil/sediment samples, respectively.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

ANALYTE REPORTING

Non-detect data were reported down to the laboratory's method detection limit (MDL) for each analyte. Positive analyte detections less than the practical quantitation limit (PQL) but greater than the MDL were qualified as estimated (J) in Table 2.

All soil results were reported on a dry (wet) weight basis.

CONCLUSION

Based on this assessment of the information provided, the data produced by Accutest Laboratory were found to exhibit acceptable levels of accuracy and precision and may be used with the noted qualifications.

TABLE 1

**SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLING EVENT AND MANHOLE SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Sample Identification</i>	<i>Location</i>	<i>Collection Date (mm/dd/yyyy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>								<i>Comments</i>	
				VOCs	SVOCs	Total Solids	TCLP VOCs	TCLP SVOCs	TCLP Metals	TCLP Pesticides	TCLP Herbicides	PCBs	
<i>Groundwater Samples</i>													
WG-6029-042913-001	MW-11	4/29/2013	5:45:00 PM	X									MS/MSD
WG-6029-042913-002	MW-107	4/29/2013	5:55:00 PM	X									
WG-6029-042913-003	MW-108	4/29/2013	6:05:00 PM	X									
WG-6029-042913-004	MW-108	4/29/2013	6:15:00 PM	X									
WG-6029-042913-005	MW-113	4/29/2013	6:25:00 PM	X									
WG-6029-042913-006	MW-115	4/29/2013	6:35:00 PM	X									
RB-6029-042913-007	Rinse Blank	4/29/2013	6:45:00 PM	X									
WG-6029-043013-008	MW-114	4/30/2013	1:10:00 PM	X									Equipment Blank
WG-6029-043013-009	MW-207	4/30/2013	1:20:00 PM	X									
WG-6029-043013-010	MW-209	4/30/2013	1:30:00 PM	X									
WG-6029-043013-011	MW-224	4/30/2013	1:40:00 PM	X									
WG-6029-043013-012	MW-220	4/30/2013	1:50:00 PM	X									
WG-6029-043013-013	MW-4	4/30/2013	2:00:00 PM	X									
WG-6029-043013-014	MW-111	4/30/2013	2:10:00 PM	X									
WG-6029-043013-015	MW-207	4/30/2013	2:20:00 PM	X									
RB-6029-043013-016	Rinse Blank	4/30/2013	2:30:00 PM	X									
TB-6029-042913	Trip Blank	4/30/2013	4:00:00 PM	X									Trip Blank
TB-6029-043013	Trip Blank	4/30/2013	4:00:00 PM	X									Trip Blank
<i>Surface Water Samples</i>													
WS-6029-043013-017	S&E Ditches Surface Water	4/30/2013	2:45:00 PM	X	X								MS/MSD
WS-6029-043013-018	S&E Ditches Surface Water	4/30/2013	2:55:00 PM	X	X								
FB-6029-043013-019	Field Blank	4/30/2013	3:05:00 PM	X	X								
Field Duplicate of WS-6029-043013-009													
Equipment Blank													
Trip Blank													
Field Blank													

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
ANNUAL GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLING EVENT AND MANHOLE SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013

<i>Sample Identification</i>	<i>Location</i>	<i>Collection Date (mm/dd/yyyy)</i>	<i>Collection Time (hr:min)</i>	<i>Analysis/Parameters</i>								<i>Comments</i>			
				VOCs	SVOCs	Total Solids	TCLP VOCs	TCLP SVOCs	TCLP Metals	TCLP Pesticides	TCLP Herbicides	PCBs	pH (corrosivity)	Flashpoint (ignitability)	Cyanide (reactivity)
<u>Sediment Samples</u>															
SE-6029-043013-020	S&E Ditches Sediment	4/30/2013	3:15:00 PM	X	X	X									MS/MSD
SE-6029-043013-021	S&E Ditches Sediment	4/30/2013	3:30:00 PM	X	X	X									Field Duplicate of SE-6029-043013-020
RB-6029-043013-022	Rinse Blank	4/30/2013	3:40:00 PM	X	X										Equipment Blank
<u>Purge Water Sample</u>															
WW-6029-043013-023	Purge Water Tote	4/30/2013	4:00:00 PM	X			X	X	X	X	X	X	X	X	
<u>Manhole Samples (Groundwater)</u>															
WG-6029-051813-024	MH-5	5/18/2013	8:20:00 AM	X											
WG-6029-051813-025	MH-7	5/18/2013	8:40:00 AM	X											
TB-6029-051813	Trip Blank	5/18/2013	8:40:00 AM	X											Trip Blank

Notes:

- VOCs Volatile organic compounds.
- SVOCs Semi-volatile organic compounds.
- TCLP Toxic Characteristic Leaching Procedure
- PCBs Polyaromatic chlorinated biphenyls.
- MS Matrix spike.
- MSD Matrix spike duplicate.

TABLE 2A

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Sample Location:</i>	<i>MH-5</i>	<i>MH-7</i>	<i>MW-4</i>	<i>MW-11</i>
<i>Sample ID:</i>	WG-6029-051813-024	WG-6029-051813-025	WG-6029-043013-013	WG-6029-042913-001
<i>Sample Date:</i>	5/18/2013	5/18/2013	4/30/2013	4/29/2013
<i>Parameters</i>				
	<i>Units</i>			
<i>Volatile Organic Compounds</i>				
1,1,1-Trichloroethane	µg/L	ND (1.0)	ND (1.0)	28.0
1,1-Dichloroethane	µg/L	0.31 J	2.2	77.7
1,2-Dichloroethane	µg/L	ND (1.0)	1.9	1.5
Acetone	µg/L	31.1	31.6	ND (5.0)
Benzene	µg/L	ND (1.0)	ND (1.0)	0.70 J
Chlorobenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	µg/L	0.87 J	4.6	57.5
Ethylbenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	µg/L	ND (1.0)	0.22 J	2.1
Trichloroethene	µg/L	ND (1.0)	1.6	88.9
Vinyl chloride	µg/L	ND (1.0)	ND (1.0)	6.2
Xylenes (total)	µg/L	ND (1.0)	ND (1.0)	ND (1.0)

TABLE 2A

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Sample Location:</i>	<i>MW-107</i>	<i>MW-108</i>	<i>MW-108</i>	<i>MW-111</i>
<i>Sample ID:</i>	WG-6029-042913-002	WG-6029-042913-003	WG-6029-042913-004	WG-6029-043013-014
<i>Sample Date:</i>	4/29/2013	4/29/2013	4/29/2013	Duplicate
<i>Parameters</i>				
<i>Units</i>				
<i>Volatile Organic Compounds</i>				
1,1,1-Trichloroethane	µg/L	33.0	5.0	ND (1.0)
1,1-Dichloroethane	µg/L	1340	299	32.9
1,2-Dichloroethane	µg/L	137	67.1	96.4
Acetone	µg/L	ND (50)	ND (5.0)	ND (5.0)
Benzene	µg/L	90.9	126	ND (1.0)
Chlorobenzene	µg/L	55.1	ND (1.0)	ND (1.0)
Chloroethane	µg/L	ND (10)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	µg/L	104	201	208
Ethylbenzene	µg/L	1030	0.50 J	0.45 J
Toluene	µg/L	2690	1.0	0.97 J
trans-1,2-Dichloroethene	µg/L	ND (10)	5.9	6.0
Trichloroethene	µg/L	4.2 J	27.8	27.8
Vinyl chloride	µg/L	97.8	115	117
Xylenes (total)	µg/L	3390	0.39 J	0.25 J

TABLE 2A

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Sample Location:</i>	MW-113	MW-114	MW-115	MW-207
<i>Sample ID:</i>	WG-6029-042913-005	WG-6029-043013-008	WG-6029-042913-006	WG-6029-043013-009
<i>Sample Date:</i>	4/29/2013	4/30/2013	4/29/2013	4/30/2013

<i>Parameters</i>	<i>Units</i>	MW-113	MW-114	MW-115	MW-207
<i>Volatile Organic Compounds</i>					
1,1,1-Trichloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	µg/L	ND (1.0)	ND (1.0)	2.1	ND (1.0)
1,2-Dichloroethane	µg/L	ND (1.0)	ND (1.0)	0.60 J	ND (1.0)
Acetone	µg/L	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Benzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	µg/L	ND (1.0)	ND (1.0)	10.1	ND (1.0)
Ethylbenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	µg/L	ND (1.0)	ND (1.0)	0.31 J	ND (1.0)
Trichloroethene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl chloride	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	µg/L	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)

TABLE 2A

**GROUNDWATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Sample Location:</i>	<i>MW-207</i>	<i>MW-209</i>	<i>MW-220</i>	<i>MW-224</i>
<i>Sample ID:</i>	WG-6029-043013-015	WG-6029-043013-010	WG-6029-043013-012	WG-6029-043013-011
<i>Sample Date:</i>	4/30/2013	4/30/2013	4/30/2013	4/30/2013
<i>Duplicate</i>				
<i>Parameters</i>	<i>Units</i>			
Volatile Organic Compounds				
1,1,1-Trichloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
1,1-Dichloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Acetone	µg/L	ND (5.0)	12.8	ND (5.0)
Benzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Chlorobenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Chloroethane	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Ethylbenzene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Toluene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Trichloroethene	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl chloride	µg/L	ND (1.0)	ND (1.0)	ND (1.0)
Xylenes (total)	µg/L	ND (1.0)	ND (1.0)	ND (1.0)

Notes:

J - Estimated concentration.

ND () - Not detected at the associated reporting limit.

TABLE 2B

**SURFACE WATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Surface Water</i>	<i>S&E Ditches Surface Water</i>
	<i>Sample ID:</i>	WS-6029-043013-017	WS-6029-043013-018
	<i>Sample Date:</i>	4/30/2013	4/30/2013
			<i>Duplicate</i>
<i>Volatile Organic Compounds</i>			
1,1,1-Trichloroethane	µg/L	ND (1.0)	ND (1.0)
1,1,2,2-Tetrachloroethane	µg/L	ND (1.0)	ND (1.0)
1,1,2-Trichloroethane	µg/L	ND (1.0)	ND (1.0)
1,1-Dichloroethane	µg/L	ND (1.0)	ND (1.0)
1,1-Dichloroethene	µg/L	ND (1.0)	ND (1.0)
1,2-Dichloroethane	µg/L	ND (1.0)	ND (1.0)
1,2-Dichloroethene (total)	µg/L	0.75 J	0.77 J
1,2-Dichloropropane	µg/L	ND (1.0)	ND (1.0)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	ND (5.0)	ND (5.0)
2-Hexanone	µg/L	ND (5.0)	ND (5.0)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	ND (5.0)	ND (5.0)
Acetone	µg/L	ND (5.0)	ND (5.0)
Benzene	µg/L	ND (1.0)	ND (1.0)
Bromodichloromethane	µg/L	ND (1.0)	ND (1.0)
Bromoform	µg/L	ND (4.0)	ND (4.0)
Bromomethane (Methyl bromide)	µg/L	ND (2.0)	ND (2.0)
Carbon disulfide	µg/L	ND (2.0)	ND (2.0)
Carbon tetrachloride	µg/L	ND (1.0)	ND (1.0)
Chlorobenzene	µg/L	ND (1.0)	ND (1.0)
Chloroethane	µg/L	ND (1.0)	ND (1.0)
Chloroform (Trichloromethane)	µg/L	ND (1.0)	ND (1.0)
Chloromethane (Methyl chloride)	µg/L	ND (1.0)	ND (1.0)
cis-1,2-Dichloroethene	µg/L	0.75 J	0.77 J
cis-1,3-Dichloropropene	µg/L	ND (1.0)	ND (1.0)
Dibromochloromethane	µg/L	ND (1.0)	ND (1.0)
Ethylbenzene	µg/L	ND (1.0)	ND (1.0)
Methylene chloride	µg/L	ND (2.0)	ND (2.0)
Styrene	µg/L	ND (5.0)	ND (5.0)
Tetrachloroethene	µg/L	ND (1.0)	ND (1.0)
Toluene	µg/L	ND (1.0)	ND (1.0)
trans-1,2-Dichloroethene	µg/L	ND (1.0)	ND (1.0)
trans-1,3-Dichloropropene	µg/L	ND (1.0)	ND (1.0)
Trichloroethene	µg/L	ND (1.0)	ND (1.0)
Vinyl chloride	µg/L	ND (1.0)	ND (1.0)
Xylenes (total)	µg/L	ND (1.0)	ND (1.0)
<i>Semi-volatile Organic Compounds</i>			
1,2,4-Trichlorobenzene	µg/L	ND (5.0)	ND (5.0)
1,2-Dichlorobenzene	µg/L	ND (5.0)	ND (5.0)
1,3-Dichlorobenzene	µg/L	ND (5.0)	ND (5.0)
1,4-Dichlorobenzene	µg/L	ND (5.0)	ND (5.0)
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/L	ND (5.0)	ND (5.0)
2,4,5-Trichlorophenol	µg/L	ND (5.0)	ND (5.0)

TABLE 2B

**SURFACE WATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Surface Water</i>	<i>S&E Ditches Surface Water</i>
	<i>Sample ID:</i>	WS-6029-043013-017	WS-6029-043013-018
	<i>Sample Date:</i>	4/30/2013	4/30/2013
	<i>Units</i>		<i>Duplicate</i>
<i>Semi-volatile Organic Compounds (Continued)</i>			
2,4,6-Trichlorophenol	µg/L	ND (5.0)	ND (5.0)
2,4-Dichlorophenol	µg/L	ND (5.0)	ND (5.0)
2,4-Dimethylphenol	µg/L	ND (5.0)	ND (5.0)
2,4-Dinitrophenol	µg/L	ND (25)	ND (25)
2,4-Dinitrotoluene	µg/L	ND (5.0)	ND (5.0)
2,6-Dinitrotoluene	µg/L	ND (5.0)	ND (5.0)
2-Chloronaphthalene	µg/L	ND (5.0)	ND (5.0)
2-Chlorophenol	µg/L	ND (5.0)	ND (5.0)
2-Methylnaphthalene	µg/L	ND (5.0)	ND (5.0)
2-Methylphenol	µg/L	ND (5.0)	ND (5.0)
2-Nitroaniline	µg/L	ND (5.0)	ND (5.0)
2-Nitrophenol	µg/L	ND (5.0)	ND (5.0)
3&4-Methylphenol	µg/L	ND (5.0)	ND (5.0)
3,3'-Dichlorobenzidine	µg/L	ND (5.0)	ND (5.0)
3-Nitroaniline	µg/L	ND (5.0)	ND (5.0)
4,6-Dinitro-2-methylphenol	µg/L	ND (10)	ND (10)
4-Bromophenyl phenyl ether	µg/L	ND (5.0)	ND (5.0)
4-Chloro-3-methylphenol	µg/L	ND (5.0)	ND (5.0)
4-Chloroaniline	µg/L	ND (5.0)	ND (5.0)
4-Chlorophenyl phenyl ether	µg/L	ND (5.0)	ND (5.0)
4-Nitroaniline	µg/L	ND (5.0)	ND (5.0)
4-Nitrophenol	µg/L	ND (25)	ND (25)
Acenaphthene	µg/L	ND (5.0)	ND (5.0)
Acenaphthylene	µg/L	ND (5.0)	ND (5.0)
Anthracene	µg/L	ND (5.0)	ND (5.0)
Benzo(a)anthracene	µg/L	ND (5.0)	ND (5.0)
Benzo(a)pyrene	µg/L	ND (5.0)	ND (5.0)
Benzo(b)fluoranthene	µg/L	ND (5.0)	ND (5.0)
Benzo(g,h,i)perylene	µg/L	ND (5.0)	ND (5.0)
Benzo(k)fluoranthene	µg/L	ND (5.0)	ND (5.0)
bis(2-Chloroethoxy)methane	µg/L	ND (5.0)	ND (5.0)
bis(2-Chloroethyl)ether	µg/L	ND (5.0)	ND (5.0)
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	ND (5.0)	ND (5.0)
Butyl benzylphthalate (BBP)	µg/L	ND (5.0)	ND (5.0)
Carbazole	µg/L	ND (5.0)	ND (5.0)
Chrysene	µg/L	ND (5.0)	ND (5.0)
Dibenz(a,h)anthracene	µg/L	ND (5.0)	ND (5.0)
Dibenzofuran	µg/L	ND (5.0)	ND (5.0)
Diethyl phthalate	µg/L	ND (5.0)	ND (5.0)
Dimethyl phthalate	µg/L	ND (5.0)	ND (5.0)
Di-n-butylphthalate (DBP)	µg/L	ND (5.0)	ND (5.0)
Di-n-octyl phthalate (DnOP)	µg/L	ND (5.0)	ND (5.0)
Fluoranthene	µg/L	ND (5.0)	ND (5.0)

TABLE 2B

**SURFACE WATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Surface Water</i>	<i>S&E Ditches Surface Water</i>
	<i>Sample ID:</i>	WS-6029-043013-017	WS-6029-043013-018
	<i>Sample Date:</i>	4/30/2013	4/30/2013
		<i>Units</i>	<i>Duplicate</i>
<i>Semi-volatile Organic Compounds (Continued)</i>			
Fluorene	µg/L	ND (5.0)	ND (5.0)
Hexachlorobenzene	µg/L	ND (5.0)	ND (5.0)
Hexachlorobutadiene	µg/L	ND (5.0)	ND (5.0)
Hexachlorocyclopentadiene	µg/L	ND (5.0)	ND (5.0)
Hexachloroethane	µg/L	ND (5.0)	ND (5.0)
Indeno(1,2,3-cd)pyrene	µg/L	ND (5.0)	ND (5.0)
Isophorone	µg/L	ND (5.0)	ND (5.0)
Naphthalene	µg/L	ND (5.0)	ND (5.0)
Nitrobenzene	µg/L	ND (5.0)	ND (5.0)
N-Nitrosodi-n-propylamine	µg/L	ND (5.0)	ND (5.0)
N-Nitrosodiphenylamine	µg/L	ND (5.0)	ND (5.0)
Pentachlorophenol	µg/L	ND (25)	ND (25)
Phenanthrene	µg/L	ND (5.0)	ND (5.0)
Phenol	µg/L	ND (5.0)	ND (5.0)
Pyrene	µg/L	ND (5.0)	ND (5.0)

Notes:

J - Estimated concentration.

ND () - Not detected at the associated reporting limit.

TABLE 2C

**SEDIMENT ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Sediment</i>	<i>S&E Ditches Sediment</i>
	<i>Sample ID:</i>	SE-6029-043013-020	SE-6029-043013-021
	<i>Sample Date:</i>	4/30/2013	4/30/2013 <i>Duplicate</i>
<i>Units</i>			
<i>Volatile Organic Compounds</i>			
1,1,1-Trichloroethane	µg/kg	ND (11)	ND (11)
1,1,2,2-Tetrachloroethane	µg/kg	ND (11)	ND (11)
1,1,2-Trichloroethane	µg/kg	ND (11)	ND (11)
1,1-Dichloroethane	µg/kg	ND (11)	ND (11)
1,1-Dichloroethene	µg/kg	ND (11)	ND (11)
1,2-Dichloroethane	µg/kg	ND (2.2)	ND (2.2)
1,2-Dichloroethene (total)	µg/kg	ND (11)	ND (11)
1,2-Dichloropropane	µg/kg	ND (11)	ND (11)
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	ND (22)	ND (22)
2-Hexanone	µg/kg	ND (11)	ND (11)
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	ND (11)	ND (11)
Acetone	µg/kg	63.1	5.6 J
Benzene	µg/kg	ND (2.2)	ND (2.2)
Bromodichloromethane	µg/kg	ND (11)	ND (11)
Bromoform	µg/kg	ND (11)	ND (11)
Bromomethane (Methyl bromide)	µg/kg	ND (11)	ND (11)
Carbon disulfide	µg/kg	1.5 J	ND (11)
Carbon tetrachloride	µg/kg	ND (11)	ND (11)
Chlorobenzene	µg/kg	ND (11)	ND (11)
Chloroethane	µg/kg	ND (11)	ND (11)
Chloroform (Trichloromethane)	µg/kg	ND (11)	ND (11)
Chloromethane (Methyl chloride)	µg/kg	ND (11)	ND (11)
cis-1,2-Dichloroethene	µg/kg	ND (11)	ND (11)
cis-1,3-Dichloropropene	µg/kg	ND (11)	ND (11)
Dibromochloromethane	µg/kg	ND (11)	ND (11)
Ethylbenzene	µg/kg	ND (2.2)	ND (2.2)
Methylene chloride	µg/kg	4.3 J	5.3 J
Styrene	µg/kg	ND (11)	ND (11)
Tetrachloroethene	µg/kg	ND (11)	ND (11)
Toluene	µg/kg	ND (2.2)	ND (2.2)
trans-1,2-Dichloroethene	µg/kg	ND (11)	ND (11)
trans-1,3-Dichloropropene	µg/kg	ND (11)	ND (11)
Trichloroethene	µg/kg	ND (11)	ND (11)
Vinyl chloride	µg/kg	ND (11)	ND (11)
Xylenes (total)	µg/kg	ND (2.2)	ND (2.2)
<i>Semi-volatile Organic Compounds</i>			
1,2,4-Trichlorobenzene	µg/kg	ND (330)	ND (280)
1,2-Dichlorobenzene	µg/kg	ND (330)	ND (280)
1,3-Dichlorobenzene	µg/kg	ND (330)	ND (280)
1,4-Dichlorobenzene	µg/kg	ND (330)	ND (280)
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	ND (330)	ND (280)
2,4,5-Trichlorophenol	µg/kg	ND (330)	ND (280)

TABLE 2C

**SEDIMENT ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Sediment</i>	<i>S&E Ditches Sediment</i>
	<i>Sample ID:</i>	SE-6029-043013-020	SE-6029-043013-021
	<i>Sample Date:</i>	4/30/2013	4/30/2013
		<i>Units</i>	<i>Duplicate</i>
<i>Semi-volatile Organic Compounds (Continued)</i>			
2,4,6-Trichlorophenol	µg/kg	ND (330)	ND (280)
2,4-Dichlorophenol	µg/kg	ND (330)	ND (280)
2,4-Dimethylphenol	µg/kg	ND (330)	ND (280)
2,4-Dinitrophenol	µg/kg	ND (1700)	ND (1400)
2,4-Dinitrotoluene	µg/kg	ND (330)	ND (280)
2,6-Dinitrotoluene	µg/kg	ND (330)	ND (280)
2-Chloronaphthalene	µg/kg	ND (330)	ND (280)
2-Chlorophenol	µg/kg	ND (330)	ND (280)
2-Methylnaphthalene	µg/kg	117 J	83.3 J
2-Methylphenol	µg/kg	ND (330)	ND (280)
2-Nitroaniline	µg/kg	ND (330)	ND (280)
2-Nitrophenol	µg/kg	ND (330)	ND (280)
3&4-Methylphenol	µg/kg	ND (330)	ND (280)
3,3'-Dichlorobenzidine	µg/kg	ND (330) J	ND (280)
3-Nitroaniline	µg/kg	ND (330)	ND (280)
4,6-Dinitro-2-methylphenol	µg/kg	ND (670)	ND (550)
4-Bromophenyl phenyl ether	µg/kg	ND (330)	ND (280)
4-Chloro-3-methylphenol	µg/kg	ND (330) J	ND (280)
4-Chloroaniline	µg/kg	ND (330)	ND (280)
4-Chlorophenyl phenyl ether	µg/kg	ND (330)	ND (280)
4-Nitroaniline	µg/kg	ND (330)	ND (280)
4-Nitrophenol	µg/kg	ND (1700)	ND (1400)
Acenaphthene	µg/kg	ND (330)	ND (280)
Acenaphthylene	µg/kg	ND (330)	ND (280)
Anthracene	µg/kg	ND (330)	ND (280)
Benzo(a)anthracene	µg/kg	37.8 J	35.1 J
Benzo(a)pyrene	µg/kg	35.0 J	33.7 J
Benzo(b)fluoranthene	µg/kg	64.4 J	59.6 J
Benzo(g,h,i)perylene	µg/kg	35.4 J	38.7 J
Benzo(k)fluoranthene	µg/kg	ND (330)	ND (280)
bis(2-Chloroethoxy)methane	µg/kg	ND (330)	ND (280)
bis(2-Chloroethyl)ether	µg/kg	ND (330) J	ND (280)
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	ND (670)	ND (550)
Butyl benzylphthalate (BBP)	µg/kg	ND (330)	ND (280)
Carbazole	µg/kg	ND (330)	ND (280)
Chrysene	µg/kg	46.1 J	44.2 J
Dibenz(a,h)anthracene	µg/kg	ND (330)	ND (280)
Dibenzofuran	µg/kg	ND (330)	ND (280)
Diethyl phthalate	µg/kg	ND (670)	ND (550)
Dimethyl phthalate	µg/kg	ND (330)	ND (280)
Di-n-butylphthalate (DBP)	µg/kg	ND (670)	ND (550)
Di-n-octyl phthalate (DnOP)	µg/kg	ND (330)	ND (280)
Fluoranthene	µg/kg	65.2 J	58.9 J

TABLE 2C

**SEDIMENT ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>S&E Ditches Sediment</i>	<i>S&E Ditches Sediment</i>
	<i>Sample ID:</i>	SE-6029-043013-020	SE-6029-043013-021
	<i>Sample Date:</i>	4/30/2013	4/30/2013
			<i>Duplicate</i>
<i>Semi-volatile Organic Compounds (Continued)</i>			
Fluorene	µg/kg	ND (330)	ND (280)
Hexachlorobenzene	µg/kg	ND (330)	ND (280)
Hexachlorobutadiene	µg/kg	ND (330)	ND (280)
Hexachlorocyclopentadiene	µg/kg	ND (330) J	ND (280)
Hexachloroethane	µg/kg	ND (330)	ND (280)
Indeno(1,2,3-cd)pyrene	µg/kg	ND (330)	37.9 J
Isophorone	µg/kg	ND (330)	ND (280)
Naphthalene	µg/kg	295 J	43.8 J
Nitrobenzene	µg/kg	ND (330)	ND (280)
N-Nitrosodi-n-propylamine	µg/kg	ND (330) J	ND (280)
N-Nitrosodiphenylamine	µg/kg	ND (330)	ND (280)
Pentachlorophenol	µg/kg	ND (1700)	ND (1400)
Phenanthrene	µg/kg	67.1 J	70.0 J
Phenol	µg/kg	ND (330)	ND (280)
Pyrene	µg/kg	64.1 J	62.3 J
<i>General Chemistry</i>			
Total solids	%	50.4	59.3

Notes:

J - Estimated concentration.

ND () - Not detected at the associated reporting limit.

TABLE 2D

**PURGE WATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>Purge Water Tote</i>
	<i>Sample ID:</i>	WW-6029-043013-023
	<i>Sample Date:</i>	4/30/2013
<i>Volatile Organic Compounds~TCLP</i>		
1,1-Dichloroethene	mg/L	ND (0.010)
1,2-Dichloroethane	mg/L	0.0153
1,4-Dichlorobenzene	mg/L	ND (0.010)
2-Butanone (Methyl ethyl ketone) (MEK)	mg/L	ND (0.050)
Benzene	mg/L	0.0043 J
Carbon tetrachloride	mg/L	ND (0.010)
Chlorobenzene	mg/L	ND (0.010)
Chloroform (Trichloromethane)	mg/L	ND (0.010)
Tetrachloroethene	mg/L	ND (0.010)
Trichloroethene	mg/L	ND (0.010)
Vinyl chloride	mg/L	ND (0.010)
<i>Semi-volatile Organic Compounds~TCLP</i>		
1,4-Dichlorobenzene	mg/L	ND (0.050)
2,4,5-Trichlorophenol	mg/L	ND (0.050)
2,4,6-Trichlorophenol	mg/L	ND (0.050)
2,4-Dinitrotoluene	mg/L	ND (0.050)
2-Methylphenol	mg/L	ND (0.050)
3&4-Methylphenol	mg/L	ND (0.050)
Hexachlorobenzene	mg/L	ND (0.050)
Hexachlorobutadiene	mg/L	ND (0.050)
Hexachloroethane	mg/L	ND (0.050)
Nitrobenzene	mg/L	ND (0.050)
Pentachlorophenol	mg/L	ND (0.25)
Pyridine	mg/L	ND (0.10)
<i>Herbicides~TCLP</i>		
2,4,5-TP (Silvex)	mg/L	ND (0.010)
2,4-Dichlorophenoxyacetic acid (2,4-D)	mg/L	ND (0.10)
<i>Metals~TCLP</i>		
Arsenic	mg/L	ND (0.10)
Barium	mg/L	ND (2.0)
Cadmium	mg/L	ND (0.050)
Chromium	mg/L	ND (0.10)
Lead	mg/L	ND (0.050)
Mercury	mg/L	ND (0.0050)
Selenium	mg/L	ND (0.10)
Silver	mg/L	ND (0.10)
<i>Polychlorinated Biphenyls</i>		
Aroclor-1016 (PCB-1016)	µg/L	ND (0.50)
Aroclor-1221 (PCB-1221)	µg/L	ND (0.50)

TABLE 2D

**PURGE WATER ANALYTICAL RESULTS SUMMARY
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameters</i>	<i>Sample Location:</i>	<i>Purge Water Tote</i>
	<i>Sample ID:</i>	WW-6029-043013-023
	<i>Sample Date:</i>	4/30/2013
<i>Polychlorinated Biphenyls (Continued)</i>		
Aroclor-1232 (PCB-1232)	µg/L	ND (0.50)
Aroclor-1242 (PCB-1242)	µg/L	ND (0.50)
Aroclor-1248 (PCB-1248)	µg/L	ND (0.50)
Aroclor-1254 (PCB-1254)	µg/L	ND (0.50)
Aroclor-1260 (PCB-1260)	µg/L	ND (0.50)
<i>Pesticides~TCLP</i>		
Chlordane, technical	mg/L	ND (0.0050)
Endrin	mg/L	ND (0.0010)
gamma-BHC (lindane)	mg/L	ND (0.00050)
Heptachlor	mg/L	ND (0.00050)
Heptachlor epoxide	mg/L	ND (0.00050)
Methoxychlor	mg/L	ND (0.0010)
Toxaphene	mg/L	ND (0.025)
<i>General Chemistry</i>		
Ignitability	Deg F	
pH corrosivity	s.u.	6.7
Reactive cyanide	mg/L	ND (1.5)
Reactive sulfide	mg/L	ND (50)

Notes:

J - Estimated concentration.

ND () - Not detected at the associated reporting limit.

TCLP - Toxic Characteristic Leaching Procedure

TABLE 3

**ANALYTICAL METHODS AND HOLDING TIME CRITERIA
ANNUAL GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLING EVENT AND MANHOLE SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013**

<i>Parameter</i>	<i>Method</i>	<i>Matrix</i>	<i>Holding Time</i>	
			<i>Collection to Extraction (Days)</i>	<i>Collection or Extraction to Analysis (Days)</i>
VOC	SW-846 8260	Water/Sediment	NA	14
SVOC	SW-846 8270C	Water	7	40
SVOC	SW-846 8270C	Sediment	14	40
Total Solids	ASTM 4643	Sediment	NA	NA
TCLP Preparation - Volatile and Non-Volatile	SW-846 1311/1312	Purge	Various	Various
Metals (not Mercury)	SW-846 6010	Water	NA	180
Mercury	SW-846 7470	Water	NA	28
Pesticides	SW-846 8151	Water	7	40
Herbicides	SW-846 8081	Water	7	40
PCB	SW-846 8082	Water	7	40
pH - corrosivity	SW-846 Chapter 7	Purge	NA	NA
Flashpoint - ignitability	SW-846 1010	Purge	NA	NA

TABLE 3

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
ANNUAL GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLING EVENT AND MANHOLE SAMPLING
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO
APRIL AND MAY, 2013

<i>Parameter</i>	<i>Method</i>	<i>Matrix</i>	<i>Holding Time</i>	
			<i>Collection to Extraction</i> <i>(Days)</i>	<i>Collection or Extraction to Analysis</i> <i>(Days)</i>
Sulfide (reactive)	SW-846 7.3.4.2	Purge	NA	NA
Cyanide (reactive)	SW-846 7.3.3.2	Purge	NA	NA

Notes

- SW-846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.
- VOCs Volatile organic compounds.
- SVOCs Semi-volatile organic compounds.
- TCLP Toxic Characteristic Leaching Procedure
- PCBs Polyaromatic chlorinated biphenyls.
- NA Not Applicable.

TABLE 4

**QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS
 ANNUAL GROUNDWATER, SURFACE WATER, AND SEDIMENT SAMPLING EVENT AND MANHOLE SAMPLING
 SUMMIT NATIONAL SUPERFUND SITE
 DEERFIELD, OHIO
 APRIL AND MAY, 2013**

<i>Parameter</i>	<i>Sample ID</i>	<i>Analyte</i>	<i>MS</i>	<i>MSD</i>	<i>RPD</i>	<i>Control Limits</i>		<i>Qualified Result</i>	<i>Units</i>
			<i>% Recovery</i>	<i>% Recovery</i>	(percent)	<i>% Recovery</i>	<i>RPD</i>		
SVOCs	SE-6029-043013-020	bis(2-Chloroethyl)ether	35	55	47.0	46 - 103	0 - 27	330 UJ	µg/kg
		4-Chloro-3-methylphenol	165	86	143.0	52 - 108	0 - 21	330 UJ	µg/kg
		N-Nitrosodi-n-propylamine	42	76	59.0	48 - 108	0 - 27	330 UJ	µg/kg
		Hexachlorocyclopentadiene	29	32	10.0	49 - 110	0 - 31	330 UJ	µg/kg
		3,3'-Dichlorobenzidine	51	27	60.0	36 - 114	0 - 28	330 UJ	µg/kg

Notes:

- MS Matrix spike.
- MSD Matrix spike duplicate.
- RPD Relative percent difference.
- SVOCs Semi-volatile Organic Compounds
- UJ Not detected; associated reporting limit is estimated.

ATTACHMENT A

CHAIN OF CUSTODY FORMS



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: NIAGARA FALLS OFFICE

Phone: _____ Fax: _____

COC NO.: 37782 ✓

PAGE 1 OF 2

JB35899

JB35889 (See Reverse Side for Instructions)

Project No./Phase/Task Code: L029-50		Laboratory Name: ACCUTEST		Lab Location: DAYTON NEW JERSEY		SSOW ID:											
Project Name: SUMMIT NATIONAL ANNUAL SAMPLING		Lab Contact:		Lab Quote No:		Cooler No:											
Project Location: DEERFIELD TOWNSHIP		SAMPLE TYPE	CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back of COC for Definitions)		Carrier:										
Chemistry Contact: DEBBIE BRENNAN		Matrix Code (see back of COC)	Grab (G) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Sail VOC)	EnCares 3x5-g. 1x25-g	Oil/tar:	Total Containers/Sample	YOC's	MSND Request	Airbill No:		
Sampler(s): D TYRAN S GARDNER														Date Shipped: 5/1/13			
SAMPLE IDENTIFICATION (Containers for each sample must be combined on one line)		DATE (mmddyy)	TIME (mmmm)													COMMENTS/ SPECIAL INSTRUCTIONS:	
1	WG-L029-042913-001	042913	1745	WG	G	X						9	X	-1	X	SUB, 499N, 499L, E53T3, 14M3, 4029,	
2	WG-L029-042913-002	042913	1755	WG	G	X						3	X	-2			
3	WG-L029-042913-003	042913	1805	WG	G	X						3	X	-3			
4	WG-L029-042913-004	042913	1815	WG	G	X						3	X	-4			
5	WG-L029-042913-005	042913	1825	WG	G	X						3	X	-5			
6	WG-L029-042913-006	042913	1835	WG	G	X						3	X	-6			
7	WG-L029-043013-008	042913	1840	WG	G	X						2	X	-7			
8	WG-L029-043013-009	042913	1845	WG	G	X						3	X	-8			
9	WG-L029-043013-010	042913	1850	WG	G	X						3	X	-9			
10	WG-L029-043013-011	042913	1855	WG	G	X						3	X	-10			
11	WG-L029-043013-012	042913	1900	WG	G	X						3	X	-11			
12	WG-L029-043013-013	042913	1905	WG	G	X						9	X	-12	X		
13	WG-L029-043013-014	042913	1910	WG	G	X						3	X	-13			
14	WG-L029-043013-015	042913	1915	WG	G	X						3	X	-14			
15	RB-L029-042913-007	042913	1920	WG	G	X						2	X	-15			
TAT Required in business days (use separate COCs for different TATs):				Total Number of Containers:				55	Notes/ Special Requirements:								
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:				All Samples in Cooler must be on COC													
RElinquished By:	COMPANY	DATE	TIME	RECEIVED BY:				COMPANY	DATE	TIME							
1. <i>Shane Haider</i>	CRA	5/1/13	1440	1.	<i>Fed L</i>					5/1/13	1440						
2. <i>Fed L</i>		5/2/13	0930	2.	<i>MM</i>					5/2/13	0930						
3.				3.													

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:

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PINK - Shipper

5ca/45 394,612,614 record in factor 572/13

GOLDENROD - Sampling Crew

MSTR# 98038540847

40c, 6-08c 305
CRA Form: COC-10B (20110804)

2B



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: NIAGARA FALLS OFFICE

Phone: _____

Fax: _____

COC NO.: 37783

PAGE 2 OF 2

JB35899

JB35899 (See Reverse Side for Instructions)

Project No/Phase/Task Code: 6029-50			Laboratory Name: ACCLTEST						Lab Location: DAYTON, NEW JERSEY			SSOW ID:								
Project Name: SUMMIT NATIONAL ANNUAL SAMPLING			Lab Contact:						Lab Quote No:			Cooler No:								
Project Location: DEERFIELD TOWNSHIP			SAMPLE TYPE						CONTAINER QUANTITY & PRESERVATION			ANALYSIS REQUESTED (See Back of COC for Definitions)			Carrier:					
Chemistry Contact: DEBBIE BRENNAN			Matrix Code (see back of COC)	Grab (G) or Camp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water / Soil VOC	Encores 3.15-G, 1x25-g	Oiler:	Total Containers/Sample	VOCs	SVOCs	PCBs	TCLP FULL	RCRA CLAS	MS/SD Request	Airbill No:
Sampler(s): D TYRAN, S GARDNER																				
SAMPLE IDENTIFICATION (Quantities for each sample may be combined on one line)			DATE (mmddyy)	TIME (hh:mm)														COMMENTS/ SPECIAL INSTRUCTIONS:		
1	RB-6029-043013-016	043013	1430	WG/G	X													-16		
2	FB-6029-043013-019	043013	1505	WG/G	X X												-17			
3	WS-6029-043013-017	043013	1445	WG/G	X X												-18			
4	WS-6029-043013-018	043013	1455	WG/G	X X												-19			
5	SE-6029-043013-020	043013	1515	SE/G	X												-20			
6	SE-6029-043013-021	043013	1530	SE/G	X												-21			
7	RB-6029-043013-022	043013	1540	WG/G	X X												-22			
8	WW-6029-043013-023	043013	1600	WG/G													-23			
9	TB-6029-042913-	042913		WG/G	X												-24			
10	TB-6029-043013-	043013		WG/G	X												-25			
11																				
12																				
13																				
14																				
15																				
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers: 59			Notes/ Special Requirements:											
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:																				
RELINQUISHED BY:			COMPANY	DATE	TIME	RECEIVED BY			COMPANY			DATE	TIME							
1.	<i>Shawn Pachner</i>	CRA	5/1/13	1440	1.	<i>Ed</i>						5/1/13	1440							
2.	<i>Ed</i>		5/2/13	0930	2.	<i>DR</i>						5/2/13	0930							
3.					3.															

4324005

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PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: CCC-10B (20110804)

28



**CONESTOGA ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: NIAGARA FALLS OFFICE

Phone: _____ Fax: _____

COG NO: 37782

PAGE 1 OF 2

JB35V99 revised

JB35XXXX (See Reverse Side for Instructions)

5
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5

Project No./Phase/Task Code: 6029 - SO			Laboratory Name: ACCLUTEST			Lab Location: DAYTON NEW JERSEY			SSOW ID:								
Project Name: SUMMIT NATIONAL ANNUAL SAMPLING			Lab Contact:			Lab Quote No:			Cooler No:								
Project Location: DEERFIELD TOWNSHIP			CONTAINER QUANTITY & PRESERVATION			ANALYSIS REQUESTED (See Back of COC for Definitions)			Carrier:								
Chemistry Contact: DEBBIE BRENNAN			Matrix Code (see back of COC)	Gel (S) or Comp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil Vac)	Enclosed 3x6 in. x25g	Other:	Total Containers/Sample	VOCS	MSDOS Request	Date Shipped: 5/1/13	Airbill No:
Sampler(s): D TYRAN S GARDNER															COMMENTS / SPECIAL INSTRUCTIONS:		
SAMPLE IDENTIFICATION (Conditions for acceptance apply)			DATE	TIME													
1	WG-6029-042913-001	042913	1745	WB	G	X										X	SUB,
2	WG-6029-042913-002	042913	1755	WB	G	X											499N, 499L,
3	WG-6029-042913-003	042913	1805	WB	G	X											E53 T3, 14M3,
4	WG-6029-042913-004	042913	1815	WB	G	X											4029,
5	WG-6029-042913-005	042913	1825	WB	G	X											
6	WG-6029-042913-006	042913	1835	WB	G	X											
7	WG-6029-043013-008	042913	1910	WB	G	X											-7
8	WG-6029-043013-009	042913	1920	WB	G	X											-8
9	WG-6029-043013-010	042913	1930	WB	G	X											-9
10	WG-6029-043013-011	042913	1940	WB	G	X											-10
11	WG-6029-043013-012	042913	1950	WB	G	X											-11
12	WG-6029-043013-013	042913	2000	WB	G	X											-12
13	WG-6029-043013-014	042913	2010	WB	G	X											-13
14	WG-6029-043013-015	042913	2020	WB	G	X											-14
15	RB-6029-042913-007	042913	1845	WB	G	X											-15
TAT Required in business days (use separate COCs for different TATs):					Total Number of Containers: 55			Notes/ Special Requirements:									
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:																	
					All Samples in Cooler must be on COC												
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY				COMPANY	DATE	TIME							
1. <u>Debbie Brennan</u>	CRA	5/1/13	1440	1.	Fed L				5/1/13	1440							
2. Fed L		5/2/13	0930	2.	MM				5/2/13	0930							
3.				3.													

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Distribution:

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5ca/45 394,612,614 rec'd in fax or 5/2/13

GOLDENROD - Sampling Crew
15STR 1E 98038540847

402,6-08,305
CRA Form: COG-10B (2010B04)



**CONESTOGA-ROVERS
& ASSOCIATES**

CHAIN OF CUSTODY RECORD

Address: NIAGARA FALLS OFFICE

Phone: _____ Fax: _____

CO NO.: 37783

TB35999 revised

PAGE 2 OF 2

JB35884

(See Reverse Side for Instructions)

Project No/Phase/Task Code: 6029-SO			Laboratory Name: ACCLTEST			Lab Location: DAYTON, NEW JERSEY			SSOW ID:											
Project Name: SUMMIT NATIONAL ANNUAL SAMPLING			Lab Contact:			Lab Quote No:			Cooler No:											
Project Location: DEERFIELD TOWNSHIP			SAMPLE TYPE			CONTAINER QUANTITY & PRESERVATION			ANALYSIS REQUESTED (See Back of COC for Definitions)											
Chemistry Contact: DEBBIE BRENNAN			Matrix Code (See back of COC)	Grab (G) or Camp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil WOC)	Endores 3x5-g-1x25-g	Glass	Total Containers/Bottle	VOCs	S VOCs	PCBs	TCLP FILL	RCRA CLAS	MAILED Request	Carrier:
Sampler(s): D TYRAN, S GARDNER																		Airbill No:		
SAMPLE IDENTIFICATION (Containers for each sample may be combined due to size.)																		Date Shipped: 5/1/13	COMMENTS/ SPECIAL INSTRUCTIONS:	
1	RB-6029-043013-016	043013	1430	WG G	X									2	X				-16	
2	FB-6029-043013-019	043013	1505	WG G	X X									5	X X				-17	
3	WS-6029-043013-017	043013	1445	WG G	X X									15	X X				-18	X
4	WS-6029-043013-018	043013	1455	WG G	X X									5	X X				-19	
5	SE-6029-043013-020	043013	1515	SE G	X									9	X X				-20	X
6	SE-6029-043013-021	043013	1530	SE G	X									3	X X				-21	
7	RB-6029-043013-022	043013	1540	WG G	X X									4	X X				-22	
8	WW-6029-043013-023	043013	1600	WG G										13	X X X				-23	
9	TB-6029-042913-	042913		WG G	X									2	X				-24	
10	TB-6029-043013-	043013		WG G	X									1	X	#2378			-25	
11																				
12																				
13																				
14																				
15																				
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers: 59			Notes/ Special Requirements:											
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:																				
						All Samples in Cooler must be on COC														
RELINQUISHED BY		COMPANY	DATE	TIME	RECEIVED BY	COMPANY		DATE	TIME											
1. <u>Debbie Gardner</u>		CRA	5/1/13	1440	1. Fed			5/1/13	1440											
2. <u>Fell</u>			5/2/13	0930	2. DN			5/2/13	0930											
3.					3.															

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

Distribution:
WHITE - Fully Executed Copy (CRA)
• 9 Enclosed R-5/2/13

YELLOW - Receiving Laboratory Copy
88 TBF: 112d 4/9/13 @ 0800 TDS 5/1/13

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: COC-105 (20110504)

L5

5



Aug 15
CONESTOGA-ROVERS
& ASSOCIATES

CHAIN OF CUSTODY RECORD

Address: 2055 Niagara Falls Blvd
Phone: 716 297 6150 Fax: JB37587

COC NO.: 40903

PAGE 1 OF 1

(See Reverse Side for Instructions)

Project No/Phase/Task Code: <u>6029-50</u>			Laboratory Name: <u>Accutest</u>						Lab Location: <u>Dryton NJ</u>		SSOW ID:				
Project Name: <u>Summit National</u>			Lab Contact:						Lab Quote No:		Cooler No:				
Project Location: <u>Deffield township</u>			SAMPLE TYPE						CONTAINER QUANTITY & PRESERVATION		ANALYSIS REQUESTED (See Back for COCs or Definitions)	Carrier:			
Chemistry Contact: <u>Debbie Brennan</u>			Matrix Code (see back of COC)	Grab (G) or Camp (C)	Unpreserved	Hydrochloric Acid (HCl)	Nitric Acid (HNO ₃)	Sulfuric Acid (H ₂ SO ₄)	Sodium Hydroxide (NaOH)	Methanol/Water (Soil VOC)	EnCores 3x5g, 1x25g	Other:	Total Containers/Sample	MSMSD Request	Airbill No:
Sampler(s): <u>D.Tyran</u>														Date Shipped: <u>5-20-13</u>	
SAMPLE IDENTIFICATION (Containers for each sample may be combined on one line)			DATE (mm/dd/yy)	TIME (hh:mm)										COMMENTS/ SPECIAL INSTRUCTIONS: <u>2099E</u>	
1	WG-6029-051813-024	5/18/13	0820	WG G	X							X			
2	WG-6029-051813-025	5/18/13	0810	WG G	X							3 X			
3	TB-6029-051813	5/18/13		TB G	X							2 X			
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
TAT Required in business days (use separate COCs for different TATs):						Total Number of Containers:			Notes/ Special Requirements:						
<input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Days <input type="checkbox"/> 3 Days <input type="checkbox"/> 1 Week <input checked="" type="checkbox"/> 2 Week <input type="checkbox"/> Other:						All Samples in Cooler must be on COC									
RElinquished By:		COMPANY:	DATE:	TIME:	RECEIVED BY:	COMPANY:	DATE:	TIME:							
<u>Dave Tyran</u>		CRA	5-20-13	0615	<u>John Morris</u>										
1.															
2.															
3.															

THE CHAIN OF CUSTODY IS A LEGAL DOCUMENT - ALL FIELDS MUST BE COMPLETED ACCURATELY

1.1

Distribution:

WHITE - Fully Executed Copy (CRA)

YELLOW - Receiving Laboratory Copy

PINK - Shipper

GOLDENROD - Sampling Crew

CRA Form: COC-10B (20110804)

21

ATTACHMENT D

ACETONE DETECTIONS IN SELECT WELLS

TABLE D.1
ACETONE CONCENTRATIONS AT SELECT WELLS - 2004 TO 2013
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Date</i>	<i>Well Designation</i>			
	<i>MW-108</i>	<i>MW-113</i>	<i>MW-209</i>	<i>MW-220</i>
October 2004	5.4 J	ND (10)	3.2 J	ND (10)
August 2005	ND (5)	ND (5)	15.6/15.8*	19.7
November 2005	NS	ND (5)	NS	NS
February 2006	ND (5)	ND (5)	14.7	ND (5)
August 2006	8.4	ND (5)	18.8	ND (5)
April 2007	ND (5)	ND (5)	ND (5)	ND (5)
November 2007	ND (5)	ND (5)	8.7	ND (5)
April 2008	5.7	ND (5)	18.7	23.5
November 2008	ND (5)	7.4	9.7	12.8
April 2009	3.8 J	ND (5)	14.4	ND (5)
June 2010	4.1 J	3.6 J	9.6/9.1*	13.8
April 2011	ND (10)	ND (10)	ND (10)/ND (10)*	ND (10)
April 2012	ND (5)	5.9	ND (5)	ND (5)
April 2013	ND (5)	ND (5)	12.8	ND (5)

Notes:

All measurements are in micrograms per liter ($\mu\text{g}/\text{L}$)

NS = Not Sampled

* = duplicate sample

J = estimated concentration

The USEPA Regional Screening Level (RSL) for acetone in tap water is 22,000 $\mu\text{g}/\text{L}$.

ATTACHMENT E

GROUNDWATER ELEVATIONS AND CONTOURS

TABLE E.1

GROUNDWATER LEVEL DATA SUMMARY
OCTOBER 2004 TO APRIL 2013
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Well	Reference Elevation	Aquifer Unit	4-Oct-04		31-Jan-05		4-May-05		22-Aug-05		27-Sep-05		27-Oct-05		28-Nov-05		20-Feb-06		30-May-06		14-Aug-06	
			Depth To Water	Elevation																		
Water Table Unit Wells																						
MW-4	1,091.09	WTU	7.68	1,083.41	7.22	1,083.87	7.14	1,083.95	8.66	1,082.43	8.48	1,082.61	7.55	1,083.54	6.94	1,084.15	6.24	1,084.85	6.62	1,084.47	7.55	1,083.54
MW-11	1,095.93	WTU	13.32	1,082.61	13.29	1,082.64	13.02	1,082.91	12.72	1,083.21	10.44	1,085.49	9.33	1,086.60	9.92	1,086.01	9.49	1,086.44	9.57	1,086.36	10.10	1,085.83
MW-101	1,107.57	WTU	8.35	1,099.22	8.20	1,099.37	7.93	1,099.64	8.97	1,098.60	4.07	1,103.50	8.55	1,099.02	8.51	1,099.06	7.75	1,099.82	7.85	1,099.72	8.61	1,098.96
MW-102	1,100.17	WTU	4.96	1,095.21	4.98	1,095.19	4.12	1,096.05	5.52	1,094.65	5.61	1,094.56	5.13	1,095.04	4.72	1,095.45	4.04	1,096.13	4.04	1,096.13	4.58	1,095.59
MW-103	1,096.22	WTU	2.78	1,093.44	2.67	1,093.55	2.29	1,093.93	3.57	1,092.65	2.90	1,093.32	2.11	1,094.11	2.35	1,093.87	2.31	1,093.91	2.52	1,093.70	3.38	1,092.84
MW-104	1,099.81	WTU	16.70	1,083.11	18.21	1,081.60	17.29	1,082.52	16.10	1,083.71	13.94	1,085.87	16.48	1,083.33	13.38	1,086.43	12.82	1,086.99	12.91	1,086.90	13.51	1,086.30
MW-105	1,101.32	WTU	18.24	1,083.08	17.96	1,083.36	16.88	1,084.44	17.68	1,083.64	15.62	1,085.70	14.47	1,086.85	14.98	1,086.34	14.40	1,086.92	14.30	1,087.02	15.08	1,086.24
MW-106	1,102.88	WTU	18.58	1,084.30	18.79	1,084.09	17.25	1,085.63	18.45	1,084.43	17.17	1,085.71	15.97	1,086.91	16.04	1,086.84	15.28	1,087.60	15.37	1,087.51	16.06	1,086.82
MW-107	1,098.27	WTU	12.26	1,086.01	13.22	1,085.05	13.14	1,085.13	12.86	1,085.41	12.40	1,085.87	11.27	1,087.00	10.94	1,087.33	9.96	1,088.31	10.06	1,088.21	10.64	1,087.63
MW-108	1,091.96	WTU	9.44	1,082.52	9.12	1,082.84	8.81	1,083.15	8.78	1,083.18	8.66	1,083.30	5.50	1,086.46	5.98	1,085.98	5.90	1,086.06	5.85	1,086.11	6.23	1,085.73
MW-109	1,087.42	WTU	4.57	1,082.85	3.61	1,083.81	3.28	1,084.14	5.14	1,082.28	5.20	1,082.22	4.18	1,083.24	3.92	1,083.50	3.24	1,084.18	3.54	1,083.88	4.42	1,083.00
MW-110	1,086.87	WTU	8.28	1,078.59	5.47	1,081.40	5.25	1,081.62	11.22	1,075.65	11.74	1,075.13	11.44	1,075.43	10.75	1,076.12	6.68	1,080.19	7.13	1,079.74	10.28	1,076.59
MW-111	1,099.67	WTU	16.97	1,082.70	17.11	1,082.56	17.09	1,082.58	16.41	1,083.26	14.21	1,085.46	13.08	1,086.59	13.57	1,086.10	13.10	1,086.57	13.18	1,086.49	13.75	1,085.92
MW-113	1,088.46	WTU	7.77	1,080.69	7.14	1,081.32	6.93	1,081.53	8.00	1,080.46	7.26	1,081.20	5.17	1,083.29	6.61	1,081.85	5.42	1,083.04	5.88	1,082.58	7.22	1,081.24
MW-114	1,097.27	WTU	10.83	1,086.44	10.72	1,086.55	10.66	1,086.61	10.76	1,086.51	9.76	1,087.51	8.84	1,088.43	9.24	1,088.03	8.93	1,088.34	8.84	1,088.43	9.94	1,087.33
MW-115	1,101.83	WTU	18.73	1,083.10	18.04	1,083.79	17.37	1,084.46	18.84	1,082.99	17.90	1,083.93	17.25	1,084.58	17.55	1,084.28	17.16	1,084.67	17.20	1,084.63	17.70	1,084.13
MW-116	1,105.54	WTU	22.73	1,082.81	23.77	1,081.77	21.11	1,084.43	23.91	1,081.63	24.14	1,081.40	24.26	1,081.28	23.58	1,081.96	23.13	1,082.41	23.02	1,082.52	22.96	1,082.58
MW-117	1,123.97	WTU	44.78	1,079.19	44.83	1,079.14	43.94	1,080.03	48.36	1,075.61	47.53	1,076.44	42.44	1,081.53	44.25	1,079.72	41.95	1,082.02	42.74	1,081.23	45.32	1,078.65
MW-118	1,098.38	WTU	24.97	1,073.41	25.74	1,072.64	23.82	1,074.56	25.61	1,072.77	26.33	1,072.05	24.92	1,073.46	25.05	1,073.33	23.96	1,074.42	23.47	1,074.91	25.06	1,073.32
PZ-1	1,104.43	WTU	8.38	1,096.05	8.23	1,096.20	8.11	1,096.32	9.00	1,095.43	9.11	1,095.32	8.63	1,095.80	8.28	1,096.15	7.52	1,096.91	7.63	1,096.80	8.09	1,096.34
PZ-101	1,108.53	WTU	14.00	1,094.53	14.11	1,094.42	12.88	1,095.65	14.46	1,094.07	14.52	1,094.01	14.01	1,094.52	13.62	1,094.91	12.74	1,095.79	12.85	1,095.68	13.37	1,095.16
PZ-102	1,100.21	WTU	9.78	1,090.43	12.47	1,087.74	12.17	1,088.04	10.27	1,089.94	12.33	1,087.88	9.62	1,090.59	9.18	1,091.03	8.35	1,091.86	8.27	1,091.94	8.83	1,091.38
PZ-103	1,093.98	WTU	7.20	1,086.78	7.83	1,086.15	7.36	1,086.62	7.88	1,086.10	8.13	1,085.85	7.29	1,086.69	6.62	1,087.36	6.00	1,087.98	6.40	1,087.58	7.14	1,086.84
PZ-104	1,097.54	WTU	12.27	1,085.27	11.88	1,085.66	10.27	1,087.27	13.00	1,084.54	12.93	1,084.61	11.10	1,086.44	11.50	1,086.04	10.57	1,086.97	10.55	1,086.99	11.81	1,085.73
PZ-105	1,101.60	WTU	20.27	1,081.33	18.26	1,083.34	17.51	1,084.09	21.68	1,079.92	22.11											

TABLE E.1

**GROUNDWATER LEVEL DATA SUMMARY
OCTOBER 2004 TO APRIL 2013
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

Well	Reference Elevation	Aquifer Unit	20-Dec-06		25-May-07		12-Nov-07		15-Apr-08		4-Nov-08		20-Apr-09		2-Jun-10		29-Apr-11		24-Apr-12		29-Apr-13	
			Depth To Water	Elevation																		
Water Table Unit Wells																						
MW-4	1,091.09	WTU	6.55	1,084.54	7.36	1,083.73	8.47	1,082.62	6.31	1,084.78	8.57	1,082.52	6.22	1,084.87	6.48	1,084.61	11.91	1,088.14	7.01	1,084.08	6.00	1,085.09
MW-11	1,095.93	WTU	9.43	1,086.50	9.87	1,086.06	10.29	1,085.64	9.08	1,086.85	10.41	1,085.52	9.12	1,086.81	9.18	1,086.75	8.42	1,087.51	9.61	1,086.32	8.78	1,087.15
MW-101	1,107.57	WTU	7.81	1,099.76	8.51	1,099.06	9.04	1,098.53	7.43	1,100.14	9.51	1,098.06	7.48	1,100.09	7.43	1,100.14	6.81	1,100.76	8.31	1,099.26	7.31	1,100.26
MW-102	1,100.17	WTU	4.02	1,096.15	4.71	1,095.46	5.36	1,094.81	3.70	1,096.47	5.79	1,094.38	3.47	1,096.70	3.51	1,096.66	2.89	1,097.28	3.96	1,096.21	3.24	1,096.93
MW-103	1,096.22	WTU	2.40	1,093.82	2.89	1,093.33	2.94	1,093.28	2.00	1,094.22	3.16	1,093.06	1.78	1,094.44	2.07	1,094.15	1.82	1,094.40	2.42	1,093.80	1.84	1,094.38
MW-104	1,099.81	WTU	12.44	1,087.37	13.23	1,086.58	13.69	1,086.12	12.21	1,087.60	13.94	1,085.87	12.40	1,087.41	12.37	1,087.44	11.52	1,088.29	12.68	1,087.13	11.88	1,087.93
MW-105	1,101.32	WTU	14.29	1,087.03	14.89	1,086.43	15.34	1,085.98	13.92	1,087.40	15.61	1,085.71	14.03	1,087.29	14.06	1,087.26	13.21	1,088.11	14.42	1,086.90	13.53	1,087.79
MW-106	1,102.88	WTU	15.36	1,087.52	15.91	1,086.97	16.51	1,086.37	14.81	1,088.07	16.83	1,086.05	14.91	1,087.97	15.07	1,087.81	14.06	1,088.82	15.47	1,087.41	14.61	1,088.27
MW-107	1,098.27	WTU	9.98	1,088.29	10.91	1,087.36	11.63	1,086.64	9.64	1,088.63	12.21	1,086.06	9.77	1,088.50	10.06	1,088.21	8.69	1,089.58	10.61	1,087.66	9.49	1,088.78
MW-108	1,091.96	WTU	5.83	1,086.13	6.30	1,085.66	6.42	1,085.54	5.48	1,086.48	6.54	1,085.42	5.39	1,086.57	5.49	1,086.47	4.78	1,087.18	6.00	1,085.96	4.97	1,086.99
MW-109	1,087.42	WTU	3.54	1,083.88	4.34	1,083.08	5.69	1,081.73	3.09	1,084.33	6.35	1,081.07	2.93	1,084.49	3.51	1,083.91	2.68	1,084.74	4.08	1,083.34	2.91	1,084.51
MW-110	1,086.87	WTU	7.03	1,079.84	8.37	1,078.50	11.51	1,075.36	5.66	1,081.21	12.26	1,074.61	5.83	1,081.04	6.56	1,080.31	4.91	1,081.96	7.13	1,079.74	4.91	1,081.96
MW-111	1,099.67	WTU	13.16	1,086.51	13.52	1,086.15	13.91	1,085.76	12.72	1,086.95	14.12	1,085.55	12.76	1,086.91	12.81	1,086.86	12.03	1,087.64	13.26	1,086.41	12.38	1,087.29
MW-113	1,088.46	WTU	5.53	1,082.93	6.39	1,082.07	7.66	1,080.80	4.02	1,084.44	7.92	1,080.54	4.96	1,083.50	4.51	1,083.95	4.38	1,084.08	6.58	1,081.88	4.47	1,083.99
MW-114	1,097.27	WTU	8.82	1,088.45	9.39	1,087.88	9.63	1,087.64	8.28	1,088.99	10.11	1,087.16	8.09	1,089.18	8.10	1,089.17	7.66	1,089.61	9.11	1,088.16	8.01	1,089.26
MW-115	1,101.83	WTU	17.12	1,084.71	17.36	1,084.47	17.80	1,084.03	16.60	1,085.23	17.93	1,083.90	16.63	1,085.20	16.58	1,085.25	16.21	1,085.62	17.12	1,084.71	16.41	1,085.42
MW-116	1,105.54	WTU	22.98	1,082.56	23.26	1,082.28	23.88	1,081.66	21.92	1,083.62	24.46	1,081.08	22.14	1,083.40	22.39	1,083.15	21.58	1,083.96	22.00	1,083.54	22.22	1,083.32
MW-117	1,123.97	WTU	41.81	1,082.16	42.94	1,081.03	46.16	1,077.81	40.29	1,083.68	47.92	1,076.05	40.83	1,083.14	40.78	1,083.19	39.92	1,084.05	42.78	1,081.19	40.41	1,083.56
MW-118	1,098.38	WTU	23.44	1,074.94	24.11	1,074.27	26.21	1,072.17	23.13	1,075.25	27.51	1,070.87	23.43	1,074.95	23.48	1,074.90	22.61	1,075.77	24.18	1,074.20	23.09	1,075.29
PZ-1	1,104.43	WTU	7.60	1,096.83	8.32	1,096.11	8.88	1,095.55	6.91	1,097.52	9.27	1,095.16	6.61	1,097.82	6.96	1,097.47	5.85	1,098.58	7.53	1,096.90	6.28	1,098.15
PZ-101	1,108.53	WTU	12.77	1,095.76	13.46	1,095.07	14.13	1,094.40	12.35	1,096.18	14.51	1,094.02	12.22	1,096.31	12.34	1,096.19	11.61	1,096.92	12.78	1,095.75	12.01	1,096.52
PZ-102	1,100.21	WTU	8.29	1,091.92	9.02	1,091.19	9.92	1,090.29	7.92	1,092.29	10.36	1,089.85	7.92	1,092.29	8.03	1,092.18	7.19	1,093.02	8.47	1,091.74	7.71	1,092.50
PZ-103	1,093.98	WTU	6.34	1,087.64	7.16	1,086.82	8.75	1,085.23	6.35	1,087.63	9.43	1,084.55	6.12	1,087.86	6.52	1,087.46	6.06	1,087.92	7.02	1,086.96	6.41	1,087.57
PZ-104	1,097.54	WTU	10.43	1,087.11	11.62	1,085.92	12.43	1,085.11	10.03	1,087.51	13.37	1,084.17	10.06	1,087.48	10.10	1,087.44	9.07	1,088.47	11.36	1,086.18	9.76	1,087.78
PZ-105	1,101.60	WTU	18.90	1,082.70	19.38	1,082.22	21.65	1,079.95	17.22	1,084.38	23.11	1,078.49	17.56	1,084.04								

TABLE E.1

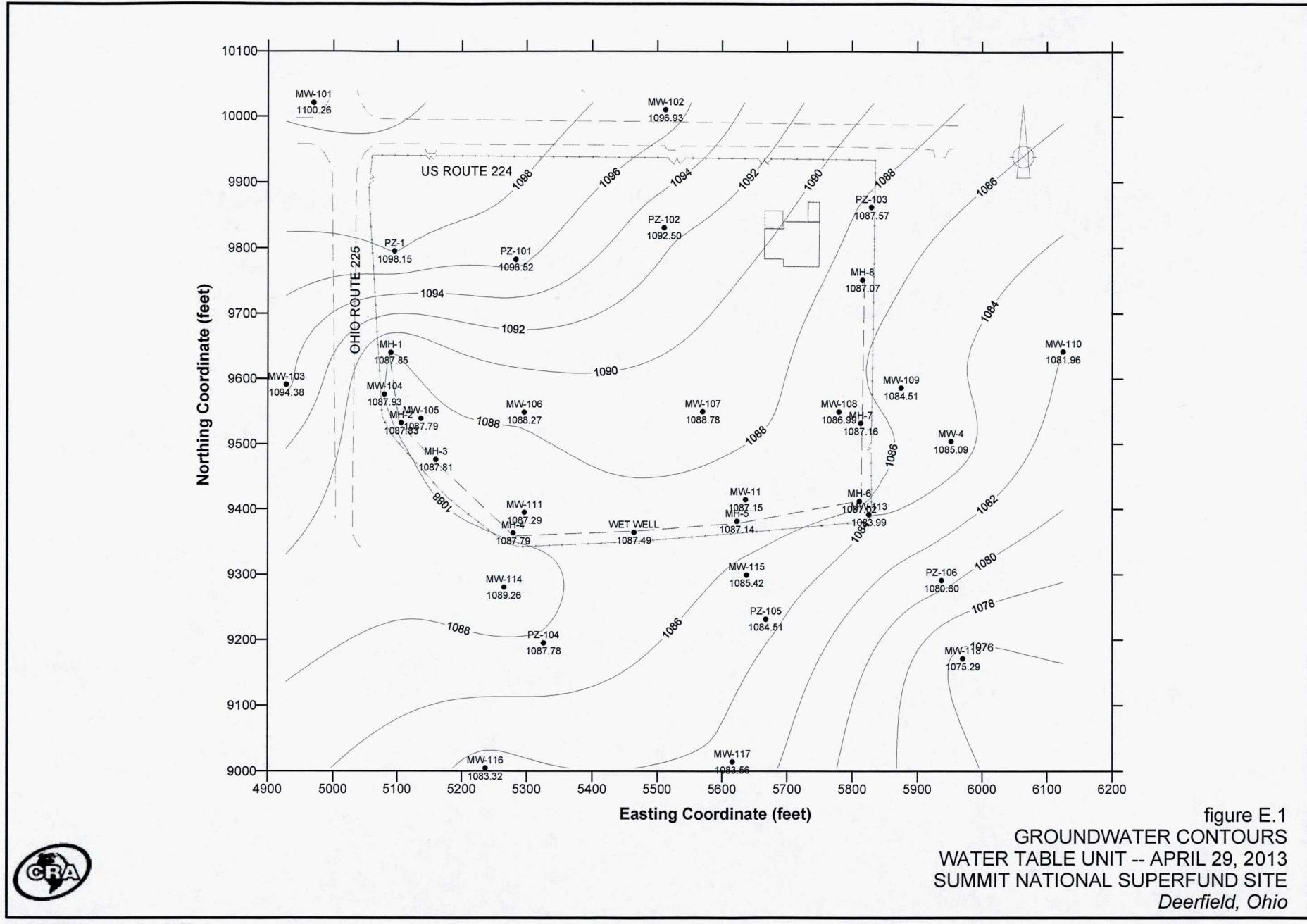
GROUNDWATER LEVEL DATA SUMMARY
OCTOBER 2004 TO APRIL 2013
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

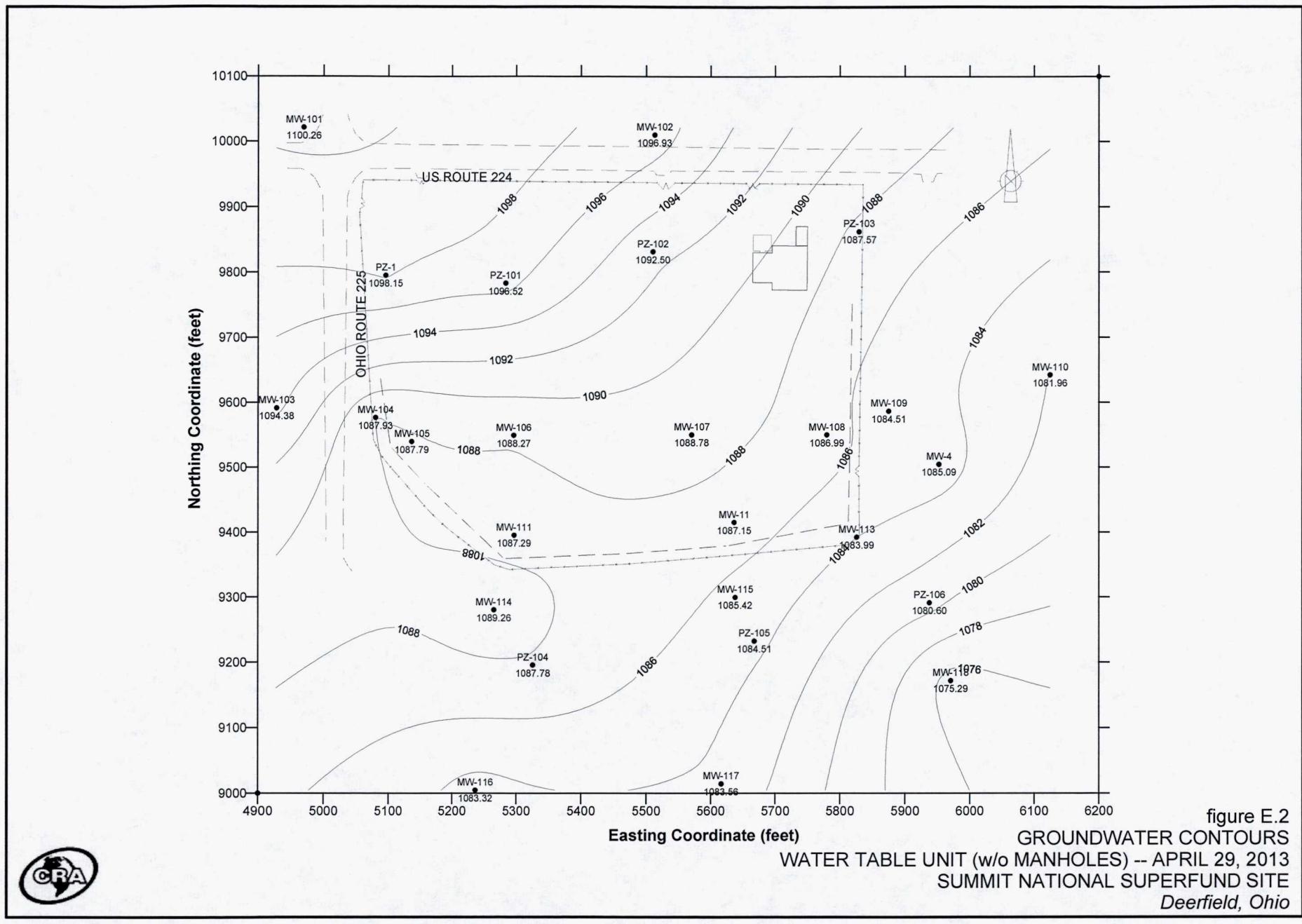
Well	Reference Elevation	Aquifer Unit	4-Oct-04		31-Jan-05		4-May-05		22-Aug-05		27-Sep-05		27-Oct-05		28-Nov-05		20-Feb-06		30-May-06		14-Aug-06	
			Depth To Water	Elevation																		
Lower Intermediate Unit Wells																						
MW-301	1,107.91	LIU	31.73	1,076.18	29.89	1,078.02	28.44	1,079.47	31.50	1,076.41	19.76	1,088.15	30.77	1,077.14	32.22	1,075.69	29.60	1,078.31	29.68	1,078.23	31.57	1,076.34
MW-302	1,100.39	LIU	29.76	1,070.63	27.63	1,072.76	27.19	1,073.20	29.57	1,070.82	24.02	1,076.37	28.72	1,071.67	28.96	1,071.43	26.92	1,073.47	26.37	1,074.02	29.20	1,071.19
MW-303	1,103.15	LIU	32.31	1,070.84	28.19	1,074.96	28.03	1,075.12	29.72	1,073.43	30.02	1,073.13	29.52	1,073.63	29.68	1,073.47	27.83	1,075.32	27.20	1,075.95	29.46	1,073.69
MW-304	1,097.73	LIU	17.17	1,080.56	16.33	1,081.40	15.88	1,081.85	17.45	1,080.28	17.01	1,080.72	16.98	1,080.75	16.92	1,080.81	15.52	1,082.21	15.77	1,081.96	16.77	1,080.96
MW-305	1,101.22	LIU	31.93	1,069.29	28.43	1,072.79	27.93	1,073.29	31.05	1,070.17	23.83	1,077.39	31.38	1,069.84	31.58	1,069.64	26.76	1,074.46	29.77	1,071.45	28.73	1,072.49
MW-306	1,103.14	LIU	33.61	1,069.53	29.24	1,073.90	29.15	1,073.99	30.93	1,072.21	33.70	1,069.44	31.52	1,071.62	31.40	1,071.74	33.43	1,069.71	31.64	1,071.50	30.03	1,073.11
MW-307	1,098.83	LIU	29.04	1,069.79	25.29	1,073.54	24.89	1,073.94	26.31	1,072.52	26.48	1,072.35	27.88	1,070.95	28.00	1,070.83	24.37	1,074.46	25.23	1,073.60	26.08	1,072.75
MW-309	1,087.81	LIU	17.95	1,069.86	15.04	1,072.77	14.27	1,073.54	15.94	1,071.87	15.48	1,072.33	16.91	1,070.90	17.20	1,070.61	13.36	1,074.45	14.62	1,073.19	15.05	1,072.76
MW-319	1,108.07	LIU	21.13	1,086.94	22.92	1,085.15	22.47	1,085.60	22.40	1,085.67	19.92	1,088.15	20.61	1,087.46	20.79	1,087.28	19.77	1,088.30	19.59	1,088.48	20.50	1,087.57
MW-320	1,091.14	LIU	20.23	1,070.91	20.64	1,070.50	20.10	1,071.04	20.52	1,070.62	20.09	1,071.05	20.47	1,070.67	20.27	1,070.87	19.49	1,071.65	19.63	1,071.51	19.80	1,071.34
MW-321	1,095.32	LIU	25.53	1,069.79	21.44	1,073.88	20.44	1,074.88	22.58	1,072.74	22.95	1,072.37	23.42	1,071.90	23.71	1,071.61	21.30	1,074.02	20.96	1,074.36	22.48	1,072.84
MW-322	1,098.88	LIU	17.45	1,081.43	16.82	1,082.06	16.26	1,082.62	20.45	1,078.43	16.43	1,082.45	15.32	1,083.56	17.20	1,081.68	15.78	1,083.10	16.04	1,082.84	16.20	1,082.68
MW-323	1,097.51	LIU	29.12	1,068.39	25.08	1,072.43	24.83	1,072.68	27.06	1,070.45	26.25	1,071.26	26.98	1,070.53	25.88	1,071.63	24.47	1,073.04	24.08	1,073.43	25.70	1,071.81
MW-324	1,089.39	LIU	18.15	1,071.24	18.21	1,071.18	18.26	1,071.13	18.18	1,071.21	17.60	1,071.79	17.72	1,071.67	17.15	1,072.24	16.07	1,073.32	16.35	1,073.04	17.17	1,072.22
PZ-301	1,100.07	LIU	20.20	1,079.87	19.04	1,081.03	18.89	1,081.18	20.81	1,079.26	19.41	1,080.66	19.84	1,080.23	19.77	1,080.30	18.51	1,081.56	18.40	1,081.67	19.91	1,080.16
PZ-302	1,101.25	LIU	31.74	1,069.51	28.94	1,072.31	28.83	1,072.42	28.48	1,072.77	28.83	1,072.42	30.80	1,070.45	30.68	1,070.57	26.64	1,074.61	28.21	1,073.04	28.32	1,072.93
PZ-303	1,098.39	LIU	29.78	1,068.61	25.07	1,073.32	24.94	1,073.45	26.46	1,071.93	20.61	1,077.78	26.62	1,071.77	26.03	1,072.36	23.81	1,074.58	23.73	1,074.66	25.53	1,072.86
PZ-305	1,096.49	LIU	27.17	1,069.32	22.71	1,073.78	22.27	1,074.22	24.00	1,072.49	24.47	1,072.02	24.58	1,071.91	24.32	1,072.17	22.06	1,074.43	21.94	1,074.55	23.75	1,072.74
PZ-306	1,088.35	LIU	15.70	1,072.65	16.05	1,072.30	14.92	1,073.43	16.32	1,072.03	16.12	1,072.23	16.26	1,072.09	17.28	1,071.07	14.58	1,073.77	14.57	1,073.78	14.93	1,073.42
PZ-307	1,091.40	LIU	16.64	1,074.76	17.85	1,073.55	17.25	1,074.15	17.47	1,073.93	17.37	1,074.03	17.58	1,073.82	28.00	1,063.40	14.89	1,076.51	15.22	1,076.18	15.62	1,075.78
Upper Sharon Unit Wells																						
MW-401	1,099.75	USU	35.45	1,064.30	35.19	1,064.56	34.88	1,064.87	35.30	1,064.45	34.59	1,065.16	35.40	1,064.35	34.59	1,065.16	33.40	1,066.35	33.38	1,066.37	33.00	1,066.75
MW-402	1,089.90	USU	32.26	1,057.64	33.68	1,056.22	31.94	1,057.96	31.88	1,058.02	34.05	1,055.85	33.61	1,056.29	33.18	1,056.72	31.70	1,058.20	31.17	1,058.73	30.32	1,059.58
MW-414	1,096.99	USU	25.09	1,071.90	25.10	1,071.89	24.03	1,072.96	24.96	1,072.03	24.46	1,072.53	25.17	1,071.82	24.82	1,072.17	23.82	1,073.17	24.15	1,072.84	24.18	1,072.81
MW-415	1,102.25	USU	33.92	1,068.33	28.86	1,073.39	2															

TABLE E.1

GROUNDWATER LEVEL DATA SUMMARY
OCTOBER 2004 TO APRIL 2013
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Well	Reference Elevation	Aquifer Unit	20-Dec-06		25-May-07		12-Nov-07		15-Apr-08		4-Nov-08		20-Apr-09		2-Jun-10		29-Apr-11		24-Apr-12		29-Apr-13	
			Depth To Water	Elevation																		
Lower Intermediate Unit Wells																						
MW-301	1,107.91	LIU	29.60	1,078.31	31.06	1,076.85	30.78	1,077.13	27.25	1,080.66	32.20	1,075.71	27.61	1,080.30	27.98	1,079.93	26.93	1,080.98	28.66	1079.25		
MW-302	1,100.39	LIU	26.35	1,074.04	29.12	1,071.27	28.27	1,072.12	24.17	1,076.22	30.48	1,069.91	24.49	1,075.90	25.28	1,075.11	24.32	1,076.07	25.28	1075.11		
MW-303	1,103.15	LIU	27.60	1,075.55	30.03	1,073.12	29.05	1,074.10	24.94	1,078.21	31.53	1,071.62	25.33	1,077.82	25.78	1,077.37	24.40	1,078.75	26.98	1076.17		
MW-304	1,097.73	LIU	15.58	1,082.15	17.93	1,079.80	17.32	1,080.41	13.39	1,084.34	18.50	1,079.23	14.22	1,083.51	14.79	1,082.94	13.69	1,084.04	15.03	1082.70		
MW-305	1,101.22	LIU	29.70	1,071.52	28.12	1,073.10	28.06	1,073.16	27.32	1,073.90	29.73	1,071.49	27.58	1,073.64	24.82	1,076.40	23.29	1,077.93	25.77	1075.45		
MW-306	1,103.14	LIU	31.61	1,071.53	31.51	1,071.63	30.46	1,072.68	26.08	1,077.06	32.52	1,070.62	26.54	1,076.60	27.22	1,075.92	25.68	1,077.46	27.82	1075.32		
MW-307	1,098.83	LIU	25.06	1,073.77	26.28	1,072.55	25.62	1,073.21	21.71	1,077.12	27.59	1,071.24	21.85	1,076.98	22.38	1,076.45	20.91	1,077.92	23.39	1075.44		
MW-309	1,087.81	LIU	14.22	1,073.59	15.15	1,072.66	14.61	1,073.20	11.27	1,076.54	16.48	1,071.33	11.37	1,076.44	11.42	1,076.39	9.96	1,077.85	12.38	1075.43		
MW-319	1,108.07	LIU	19.93	1,088.14	22.09	1,085.98	20.68	1,087.39	18.43	1,089.64	20.91	1,087.16	19.12	1,088.95	19.02	1,089.05	18.16	1,089.91	18.74	1089.33		
MW-320	1,091.14	LIU	19.60	1,071.54	20.69	1,070.45	20.48	1,070.66	18.38	1,072.76	20.48	1,070.66	18.53	1,072.61	18.78	1,072.36	18.16	1,072.98	18.28	1072.86		
MW-321	1,095.32	LIU	20.93	1,074.39	22.75	1,072.57	22.00	1,073.32	17.94	1,077.38	24.07	1,071.25	18.21	1,077.11	18.76	1,076.56	17.30	1,078.02	19.87	1075.45		
MW-322	1,098.88	LIU	15.97	1,082.91	16.61	1,082.27	16.22	1,082.66	12.58	1,086.30	17.09	1,081.79	13.93	1,084.95	14.11	1,084.77	13.12	1,085.76	14.19	1084.69		
MW-323	1,097.51	LIU	23.97	1,073.54	27.42	1,070.09	26.25	1,071.26	20.77	1,076.74	28.99	1,068.52	21.53	1,075.98	22.18	1,075.33	20.46	1,077.05	22.58	1074.93		
MW-324	1,089.39	LIU	16.29	1,073.10	18.03	1,071.36	18.21	1,071.18	14.79	1,074.60	19.32	1,070.07	15.07	1,074.32	15.76	1,073.63	14.71	1,074.68	15.63	1073.76		
PZ-301	1,100.07	LIU	18.69	1,081.38	21.12	1,078.95	20.63	1,079.44	16.59	1,083.48	21.86	1,078.21	17.45	1,082.62	18.33	1,081.74	17.03	1,083.04	18.64	1081.43		
PZ-302	1,101.25	LIU	28.07	1,073.18	28.51	1,072.74	27.91	1,073.34	24.00	1,077.25	29.86	1,071.39	24.18	1,077.07	24.69	1,076.56	23.21	1,078.04	25.78	1075.47		
PZ-303	1,098.39	LIU	23.66	1,074.73	25.88	1,072.51	25.23	1,073.16	21.03	1,077.36	27.40	1,070.99	21.42	1,076.97	22.00	1,076.39	20.48	1,077.91	23.12	1075.27		
PZ-305	1,096.49	LIU	21.90	1,074.59	24.22	1,072.27	23.37	1,073.12	19.28	1,077.21	25.48	1,071.01	19.54	1,076.95	20.07	1,076.42	18.58	1,077.91	21.23	1075.26		
PZ-306	1,088.35	LIU	14.50	1,073.85	17.07	1,071.28	16.27	1,072.08	12.91	1,075.44	16.00	1,072.35	12.98	1,075.37	13.33	1,075.02	12.73	1,075.62	13.26	1075.09		
PZ-307	1,091.40	LIU	15.08	1,076.32	18.28	1,073.12	17.31	1,074.09	12.40	1,079.00	17.15	1,074.25	12.64	1,078.76	13.11	1,078.29	12.17	1,079.23	12.69	1078.71		
Upper Sharon Unit Wells																						
MW-401	1,099.75	USU	33.32	1,066.43	33.39	1,066.36	32.72	1,067.03	30.63	1,069.12	31.82	1,067.93	29.65	1,070.10	29.69	1,070.06	29.38	1,070.37	29.02	1070.73		
MW-402	1,089.90	USU	31.14	1,058.76	29.22	1,060.68	29.21	1,060.69	28.32	1,061.58	28.36	1,061.54	27.83	1,062.07	27.37	1,062.53	26.92	1,062.98	26.64	1063.26		
MW-414	1,096.99	USU	24.11	1,072.88	25.10	1,071.89	24.76	1,072.23	22.56	1,074.43	25.04	1,071.95	22.67	1,074.32	22.88	1,074.11	22.11	1,074.88	22.42	1074.57		





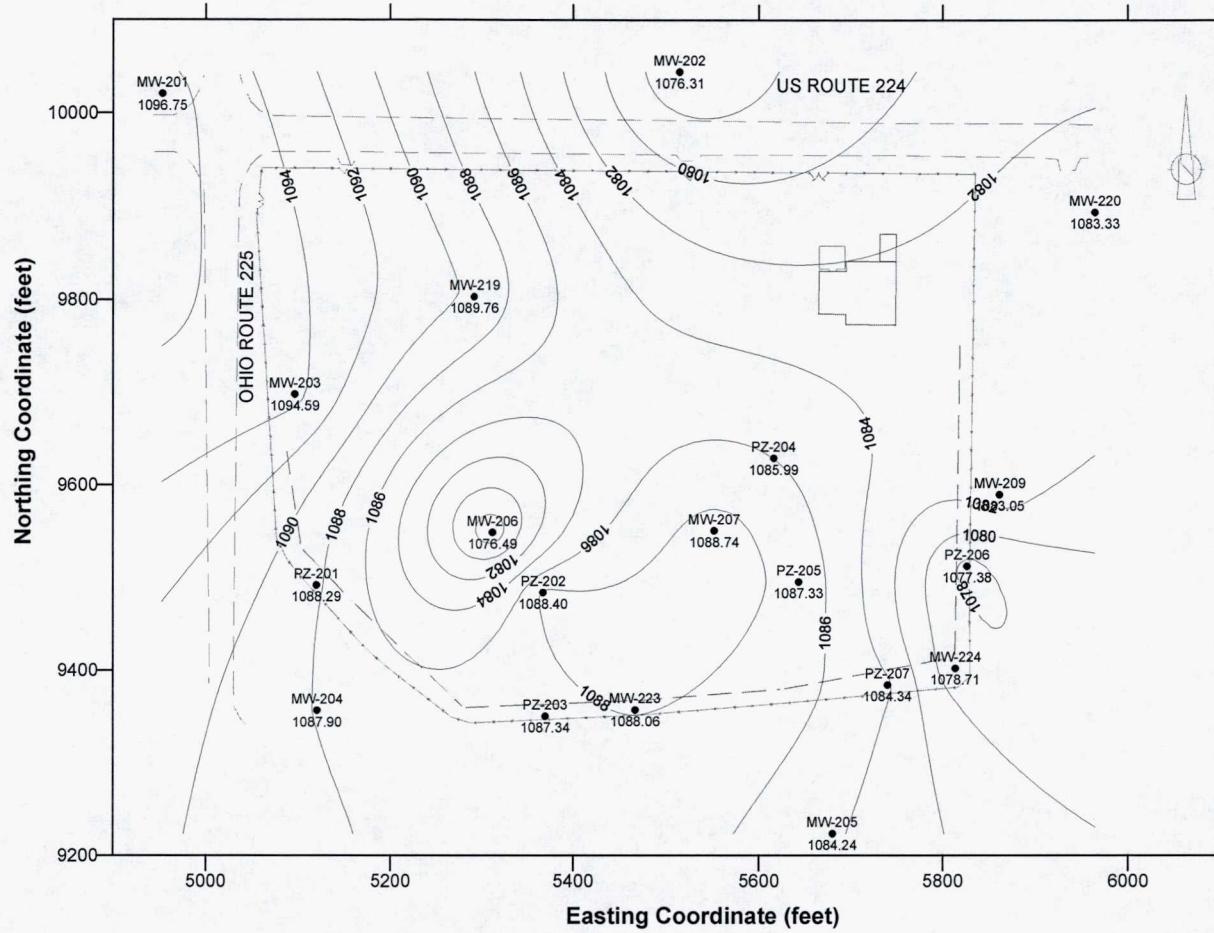


figure E.3
GROUNDWATER CONTOURS
UPPER INTERMEDIATE UNIT -- APRIL 29, 2013
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio



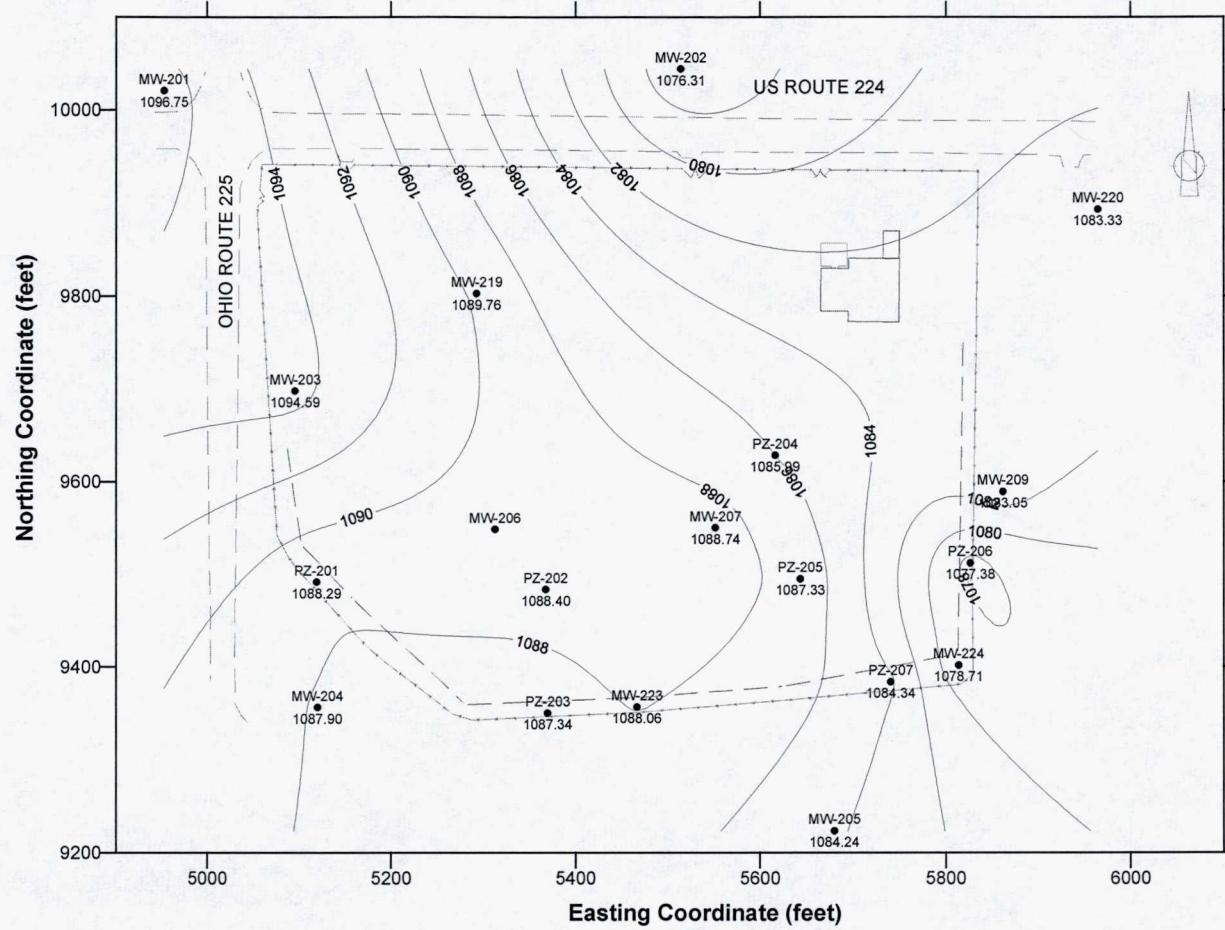


figure E.4
GROUNDWATER CONTOURS
UPPER INTERMEDIATE UNIT (w/o MW-206) -- APRIL 29, 2013
SUMMIT NATIONAL SUPERFUND SITE
Deerfield, Ohio



ATTACHMENT F

SURFACE WATER AND SEDIMENT DETECTION SUMMARIES (2004-2013)

TABLE F.1
DETECTED VOCs IN SURFACE WATER - 2004 TO 2013
CONFLUENCE OF SOUTH & EAST DRAINAGE DITCHES
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

Parameters	Sample Dates and Concentrations									
	October 2004	August 2005	August 2006	April 2007	April 2008	April 2009	June 2010	April 2011	April 2012	April 2013
Acetone	ND (10)/ND (10) *	ND (5)	ND (5)/ND (5) *	ND (5)/ND (5) *	ND (5)/ND (5) *	ND (5)	7.3/6.7 *	ND (10)/ND (10) *	ND (10)/ND (10) *	ND (5)/ND (5) *
cis-1,2-Dichloroethene	ND (1)/ND (1) *	ND (1)	0.44 J/0.43 J *	0.90 J/0.88 J *	1.3/1.2 *	0.51 J	ND (1)/0.28 J *	1.2/1.1 *	1.7/1.8 *	0.75 J/0.77 J *
Carbon disulfide	ND (2)/ND (2) *	0.42 J	ND (2) U/ND (2) *	ND (2)/ND (2) *	ND (2)/ND (2) *	ND (2)	ND (2)/ND (2) *	ND (2.0)/ND (2.0) *	ND (2.0)/ND (2.0) *	ND (2.0)/ND (2.0) *
Trichloroethene	ND (1)/ND (1) *	ND (1)	ND (1)/ND (1) *	0.45 J/0.46 J *	0.53 J/0.49 J *	ND (1)	ND (1)/ND (1) *	0.35 J /0.33 J *	0.45 J /0.49 J *	ND (1.0)/ND (1.0) *
1,1-Dichloroethane	ND (1)/ND (1) *	ND (1)	ND (1)/ND (1) *	ND (1)/ND (1) *	ND (1)/ND (1) *	ND (1)	ND (1)/ND (1) *	ND (1)/ND (1) *	0.24 J/0.25 J *	ND (1.0)/ND (1.0) *
1,2-Dichloroethane	ND (1)/ND (1) *	ND (1)	ND (1)/ND (1) *	ND (1)/ND (1) *	ND (1)/ND (1) *	ND (1)	ND (1)/ND (1) *	ND (1)/ND (1) *	ND (1.0)/0.28 J *	ND (1.0)/ND (1.0) *

Notes:

All measurements are in micrograms per liter ($\mu\text{g}/\text{L}$).

VOCs = Volatile organic compounds

NA = Not Analyzed

* = duplicate sample

J = Estimated concentration

U = Not present at or above the associated value

The USEPA Regional Screening Level (RSL) for acetone in tap water is 22,000 $\mu\text{g}/\text{L}$.

TABLE F.2

**DETECTED COMPOUNDS
2013 SEDIMENT SAMPLE
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO**

Parameters	Units	Screening Levels			Mean Background Soil Concentration	S&E Ditches Sediment	S&E Ditches Sediment
		Residential		Industrial		4/30/2013	4/30/2013
		a	b	c			Duplicate
Volatile Organic Compounds							
Acetone	ug/kg	61000000	630000000	NV	63.1	5.6 J	
Carbon disulfide	ug/kg	820000	3700000	NV	1.5 J	ND (11)	
Methylene chloride	ug/kg	11000	53000	NV	4.3 J	5.3 J	
Semivolatile Organic Compounds							
2-Methylnaphthalene	ug/kg	310000	4100000	972	117 J	83.3 J	
Benzo(a)anthracene	ug/kg	150	2100	222	37.8 J	35.1 J	
Benzo(a)pyrene	ug/kg	15	210	161	35.0 J ^a	33.7 J ^a	
Benzo(b)fluoranthene	ug/kg	150	2100	351	64.4 J	59.6 J	
Benzo(g,h,i)perylene	ug/kg	-	-	65	35.4 J	38.7 J	
Chrysene	ug/kg	15000	210000	268	46.1 J	44.2 J	
Fluoranthene	ug/kg	2300000	22000000	353	65.2 J	58.9 J	
Indeno(1,2,3-cd)pyrene	ug/kg	150	2100	68	ND (330)	37.9 J	
Naphthalene	ug/kg	3600	18000	859	295 J	43.8 J	
Phenanthrene	ug/kg	-	-	725	67.1 J	70.0 J	
Pyrene	ug/kg	1700000	17000000	331	64.1 J	62.3 J	
General Chemistry							
Total solids	%	-	-	NV	50.4	59.3	

Notes

ND - Not detected at the associated reporting limit

J - Estimated concentration

NV - No value

ATTACHMENT G

MANHOLE SAMPLING RESULTS (2013)



**CONESTOGA-ROVERS
& ASSOCIATES**

9033 Meridian Way, West Chester, Ohio 45069
Telephone: (513) 942-4750 Fax: (513) 942-8585
www.CRAworld.com

MEMORANDUM

TO: File REF. NO.: 006029-50

FROM: Nick Schapman DATE: October 21, 2013

C.C.:

RE: Limited Hydrogeologic Evaluation - Summit National Superfund Site

As requested by Summit National Facility Trust (SNFT), Conestoga-Rovers & Associates (CRA) conducted a limited hydrogeologic evaluation in 2013 of the influence the inactive pipe and media drain has on groundwater flow at the Summit National Superfund Site in Deerfield, Ohio (Site). This evaluation was done to assist in determining if installing a limited phytocontrol system (i.e., select tree planting) should be further considered at this time for groundwater hydraulic control, as previously discussed with the Ohio Environmental Protection Agency (OEPA) and the United States Environmental Protection Agency (USEPA). The evaluation included slug testing of select monitoring wells and sampling groundwater from two pipe and media drain manholes. The following outlines the findings/results of the evaluation.

Groundwater Quality Sampling and Analysis

A passive diffusion bag (PDB) sampler was suspended in Manhole 5 (MH-5) and Manhole 7 (MH-7) on April 30, 2013. Water samples were collected on May 18, 2013 and sent to the laboratory to be analyzed for the current Site-Specific Indicator Parameter List (SSIPL) compounds, which are listed in the chart below.

Site-Specific Indicator Parameter List	
1,1,1-Trichloroethane (1,1,1-TCA)	Chlorobenzene
1,1-Dichloroethane (1,1-DCA)	Chloroethane
1,2-Dichloroethane (1,2-DCA)	Ethylbenzene
cis-1,2-Dichloroethene (cis-1,2-DCE)	Toluene
trans-1,2-Dichloroethene (trans-1,2-DCE)	Trichloroethene (TCE)
Acetone	Vinyl Chloride (VC)
Benzene	Xylenes, Total

The samples collected from the manholes are not required for the annual groundwater monitoring event, but were collected to compare relative chemical concentrations to nearby upgradient monitoring wells, MW-11 and MW-108, respectively. The samples collected from the manholes showed overall lower VOC concentrations, except for acetone, when compared to the respective upgradient monitoring wells (see Table G.1). A summary of detected VOC compounds in the two manholes is provided below, along with VOC concentrations found in the upgradient monitoring wells.

ID	Parameters	PDB Sample 2013	MCL ($\mu\text{g/L}$)	MW-11	MW-108
MH-5	1,1-Dichloroethane	0.31 J	-	77.7	
	Acetone	31.1	-	-	
	cis-1,2-Dichloroethene	0.87 J	70	57.5	
MH-7	1,1-Dichloroethane	2.2	-		299/309
	1,2-Dichloroethane	1.9	5		67.1/67.6
	Acetone	31.6	-		-
	cis-1,2-Dichloroethene	4.6	70		201/208
	trans-1,2-Dichloroethene	0.22 J	100		5.9/6.0
	Trichloroethene	1.6	5		27.8/27.8

Note: "J" indicates an estimated result below the reporting limit

The results indicate that VOCs detected at the monitoring wells upgradient of the inactive pipe and media drain are not significantly migrating into the drain.

Groundwater Hydraulic Evaluation

To further evaluate hydraulic conditions along the eastern portion of the Site, water levels were collected from the eight existing pipe and media drain manholes and the wet well along the southern half of the Site perimeter concurrently with the annual groundwater monitoring event in April 2013. Water levels in the pipe and media drain were generally higher relative to the nearby upgradient monitoring wells. The higher elevations confirm that the pipe and media drain acts to limit off-site WTU groundwater migration. This hydraulic condition is supported by the groundwater chemical data that essentially shows non-detectable levels for the SSIPL parameters in the off-Site monitoring wells.

Hydraulic Conductivity Evaluation of the Water Table Unit (WTU)

Single well response (slug) tests were performed on MW-11, MW-107, MW-108, MW-113, and MW-115 to determine the hydraulic conductivity for the WTU at these locations and what effect it could have on groundwater migration. Response test data were inputted in the computer software AQTESOLV and analyzed using the Hvorslev (1951)¹ method. Single well response tests are summarized on Table G.2. As shown, the K values vary by approximately three orders of magnitude across the area from 1.7×10^{-5} feet/minute (ft/min) at MW-113 to 2.4×10^{-2} ft/min at MW-11, with a median value of 2×10^{-3} ft/min. These wide ranging values highlight the overall heterogeneity of the WTU. The WTU is a mixture fill material with native sand and clays onsite. The 2013 hydraulic conductivity values show higher conductivity values than the RI hydraulic conductivity values (RI median K value = 4×10^{-4} ft/min). However, as noted above, the K values in the WTU are highly variable.

¹ Hvorslev, M.J., 1951. Time Lag and Soil Permeability in Ground-Water Observations, Bull. No. 36, Waterways Exper. Sta. Corps of Engrs, U.S. Army, Vicksburg, Mississippi, pp. 1-50.

Discussion / Conclusion

The limited hydrogeologic evaluation and chemical data confirm that there is little potential for off-Site groundwater contaminant migration, as collaborated by the routine groundwater sample data. The combination of the pipe and media drain and the presence of low permeability deposits impede off-site migration. Therefore, a phytocontrol system does not appear to be warranted to address the potential for migration.

TABLE G.1

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ANALYTICAL DATA SUMMARY
MAY 2013 SAMPLING - MANHOLES 5 AND 7
SUMMIT NATIONAL SUPERFUND SITE
DEERFIELD, OHIO

<i>Sample Location:</i>	<i>MH-5</i>	<i>MH-7</i>
<i>Sample ID:</i>	WG-6029-051813-024	WG-6029-051813-025
<i>Sample Date:</i>	5/18/2013	5/18/2013
Parameters		Units
<i>Volatile Organic Compounds</i>		
1,1,1-Trichloroethane	ug/L	ND (1.0)
1,1-Dichloroethane	ug/L	0.31 J
1,2-Dichloroethane	ug/L	ND (1.0)
Acetone	ug/L	31.1
Benzene	ug/L	ND (1.0)
Chlorobenzene	ug/L	ND (1.0)
Chloroethane	ug/L	ND (1.0)
cis-1,2-Dichloroethene	ug/L	0.87 J
Ethylbenzene	ug/L	ND (1.0)
Toluene	ug/L	ND (1.0)
trans-1,2-Dichloroethene	ug/L	ND (1.0)
Trichloroethene	ug/L	ND (1.0)
Vinyl chloride	ug/L	ND (1.0)
Xylenes (total)	ug/L	ND (1.0)

Notes

ND - Not detected at the associated reporting limit

J - Estimated concentration

TABLE G.2
SINGLE WELL RESPONSE TEST REULTS
SUMMIT NATIONAL SUPERFUND SITE

<u>Test No.</u>	<u>MW-115</u>	<u>MW-11</u>	<u>MW-113</u>	<u>MW-108</u>	<u>MW-107</u>
Test 1 Falling	0.0098	0.022	0.000017	0.00106	0.0019
Test 1 Rising	0.0109	0.024	0.00011 *	0.00105	0.002
Test 2 Falling	0.0107	0.023		0.00096	0.0019
Test 2 Rising	0.0109	0.026		0.00097	0.002
MEDIAN K VALUE	0.002				

NOTES:

All Values in feet/minute (ft/m)

Single well response test data analyzed using Hvorslev (1951)

* Data questionable - not used